Human Development is Economic Development

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THE UNIVERSITY OF CHICAGO

Making the Case for Investing in High Quality Early Childhood Education in Mississippi: A Conversation with Dr. James Heckman

January 25th, 2018
The challenges: economic inequality, social mobility, a divided society, and polarized leadership.
# Key Facts - Mississippi and the U.S.

<table>
<thead>
<tr>
<th>Demographic Profile, 2002-2003</th>
<th>Mississippi</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty Rate 2017 (%)</td>
<td>20.8%</td>
<td>12.7%</td>
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<tr>
<td>Poverty Rate 2000 (%)</td>
<td>18.2%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Poverty Rate 1990 (%)</td>
<td>25.2%</td>
<td>13.1%</td>
</tr>
<tr>
<td>Children in Single-Parent Families 2016 (%)</td>
<td>45%</td>
<td>35%</td>
</tr>
<tr>
<td>Children in Single-Parent Families 2000 (%)</td>
<td>42%</td>
<td>31%</td>
</tr>
<tr>
<td>Children in Single-Parent Families 1990 (%)</td>
<td>35%</td>
<td>25%</td>
</tr>
</tbody>
</table>

*Source: US Census Bureau, Kids Count Data Center*
Effective way to alleviate poverty and inequality: skills, not handouts.
Changes in Real Wage Levels of Full-time U.S. Workers by Education, 1963-2012, Males

Source: Autor 2014, Skills, Education, and the Rise of Earnings Inequality Among the “Other 99 Percent.”
Trends in the Intergenerational Correlation of Welfare Participation

Note: Welfare participation includes AFDC/TANF, SSI, Food Stamps and Other Welfare.
Help troubled American families to develop the skills of their children through voluntary programs.
We can reduce inequality and promote inclusion and social mobility by solving the skills problem.
A comprehensive approach to skill development makes dollars and sense.
Fragmented solutions are often not the most effective ones—the problems and their causes are interrelated.
Should only the squeaky wheel get the grease?
The Pareto Principle

20% of the Actors Account for 80% of the Results.

Vilfredo Pareto, 1848-1923
Social Welfare Benefit Months

20% of Cohort Members = 80% of Total Social Welfare Benefit Months

% of Total Social Welfare Benefit Months
(N = 24,997 months)

% of Cohort Members
The High-need/High-cost Group in 3 or more sectors: How many health/social services do they use?

- Social Welfare: 66%
- Fatherless Children: 77%
- Smoking: 54%
- Excess Weight: 40%
- Hospital Stays: 78%
- Prescription Fills: 36%
- Injury Claims: 81%
Small Footprint of cohort members never in any high-cost group:

- Cohort: 30%
- Social Welfare: 6%
- Fatherless Children: 3%
- Smoking: 7%
- Excess Weight: 1%
- Hospital Stays: 7%
- Prescription Fills: 3%
- Injury Claims: 15%
- Crime: 0%
Childhood Risk Factors to Describe High-cost Actor Groups: Composites across ages 3, 5, 7, 9, 11

- IQ
- Self-control
- SES (socio-economic status)
- Maltreatment
Summary of findings

• 20% of people contribute 80% of social/health problems.

• A high-need/high-cost population segment uses ~half of resources in multiple sectors.

• Most high-need/high-cost people in this segment share risk factors in the first decade of life;

• Brain integrity in the first years of life is important.

Seen in this way, targeting early-life risks seem important enough to warrant investment in early-years preventions.
Invest more in prevention and less in remediation.

Invest in flourishing lives, not in correcting problems after they appear.
Success depends on having the right skills and abilities.
Supporting families in engaging and nurturing their children is key to success in education and learning at all stages of a child’s life.
The importance of the early years: skills beget skills.
Develop cognition and character from conception, through birth and into school and career training.
Character and cognition are skills, *not* traits fixed at birth.
They can be fostered.
Developing multiple skills and abilities is the best way to solve the problems of economic and social inequality.
A skilled workforce is a flexible, adaptable, and productive workforce.
The family is the cornerstone of effective skill development.
Yet American family life is under stress.
The challenges facing families impair their ability to foster the skills of their children.
Children Under 18 Living in Single Parent Households by Marital Status of Parent

Source: IPUMS CPS 1976-2016
Children in Single-Parent Families, Mississippi

Source: Kids Count Data Center
Percent of Births to Unmarried Women

Source: CDC
Hart & Risley, 1995

Children enter school with “meaningful differences” in vocabulary knowledge.

1. Emergence of the Problem
   In a typical hour, the average child hears:

<table>
<thead>
<tr>
<th>Family Status</th>
<th>Actual Differences in Quantity of Words Heard</th>
<th>Actual Differences in Quality of Words Heard</th>
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</thead>
<tbody>
<tr>
<td>Welfare</td>
<td>616 Words</td>
<td>5 affirmatives, 11 prohibitions</td>
</tr>
<tr>
<td>Working Class</td>
<td>1,251 Words</td>
<td>12 affirmatives, 7 prohibitions</td>
</tr>
<tr>
<td>Professional</td>
<td>2,153 Words</td>
<td>32 affirmatives, 5 prohibitions</td>
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2. Cumulative Vocabulary at Age 3

<table>
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<tbody>
<tr>
<td>Children from welfare families:</td>
</tr>
<tr>
<td>Children from working class families:</td>
</tr>
<tr>
<td>Children from professional families:</td>
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</tbody>
</table>
Mean Achievement Test Scores by Age by Maternal Education

Each score standardized within observed sample. Using all observations and assuming data missing at random. Source: Brook-Gunn et al. (2006).
Per Capita Enrichment Expenditures on Children ($2008) Top Versus Bottom Quartile of Households

Source: Duncan and Murnane (2011)
Family environments that adversely affect parenting are the true measure of child poverty.
Early childhood programs can substantially reduce achievement gaps and produce better child outcomes.
They work with parents and encourage parents.
Need proper measures of program output.
Perry Preschool Program: IQ, by age and treatment group

Source: Perry Preschool Program. IQ measured on the Stanford-Binet Intelligence Scale (Terman & Merrill, 1960). Test was administered at program entry and each of the ages indicated.
Yet: 7-10% per annum rate of return
Worked primarily through boosting social and emotional skills.
Has impacts across generations.
Abecedarian shows healthy benefits from a comprehensive approach.
### Abecedarian Project, Health Effects at Age 35 (Males)

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<th>Treatment Mean</th>
<th>Control Mean</th>
<th>Treatment p-value</th>
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<tr>
<td>Systolic Blood Pressure</td>
<td>125.79</td>
<td>143.33</td>
<td>0.018</td>
</tr>
<tr>
<td>Diastolic Blood Pressure</td>
<td>78.53</td>
<td>92.00</td>
<td>0.024</td>
</tr>
<tr>
<td>Pre-Hypertension</td>
<td>0.68</td>
<td>0.78</td>
<td>0.235</td>
</tr>
<tr>
<td>Hypertension</td>
<td>0.10</td>
<td>0.44</td>
<td>0.011</td>
</tr>
<tr>
<td>HDL Cholesterol</td>
<td>53.21</td>
<td>42.00</td>
<td>0.067</td>
</tr>
<tr>
<td>Cholesterol/HDL-C</td>
<td>3.89</td>
<td>4.69</td>
<td>0.057</td>
</tr>
<tr>
<td>Abdominal Obesity</td>
<td>0.65</td>
<td>0.87</td>
<td>0.136</td>
</tr>
<tr>
<td>Metabolic Syndrome</td>
<td>0.00</td>
<td>0.25</td>
<td>0.009</td>
</tr>
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Source: Campbell, Conti, Heckman, Moon, Pinto, Pungello and Pan (2014).
Rate of return:
• Overall: 13.7% per annum
• Males: 14% per annum
• Females: 10% per annum
Life-cycle Net Present Value of Main Components of the CBA

Per-annum Rate of Return: Males and Females 13.7% (s.e. 3%).
Benefit-cost Ratio: Males and Females 7.3 (s.e. 1.8).
The enhanced income of mothers from providing childcare by itself pays for program costs.
The Importance of the Early Years: Skills Beget Skills

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<th>Social-emotional Skills</th>
<th>Cognitive Skills, Health</th>
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<tr>
<td>(sit still; pay attention; engage in learning; open to experience)</td>
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<th>Health</th>
<th>Cognitive Skills, Social-Emotional Skills</th>
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<td>(fewer lost school days; ability to concentrate)</td>
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<th>Cognitive Skills</th>
<th>Produce better health practices; produce more motivation; greater perception of rewards, social-emotional skills</th>
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<tr>
<td>(child better understands and controls its environment)</td>
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**Outcomes:** increased productivity, higher income, better health, more family investment, enhanced social mobility, reduced social costs.
Later remediation is costly and as currently configured is usually ineffective.
Effective adolescent remediation targets social and emotional skills.
Mentoring: An age-adapted form of parenting.
Predistribution, not just redistribution or remediation.
Returns to a Unit Dollar Invested

- Programs targeted toward the earliest years
- Preschool programs
- Schooling
- Job training

Source: Heckman (2008)
Ingredients of Effective Programs
• Returns on high quality programs for disadvantaged children
• Advantaged children have other resources often much better than those from public programs
Successful early childhood programs help parents grow their parenting skills, foster the skills and aspirations of their children, and make for engaged and inclusive communities, a more skilled workforce, and a healthier society.
Proactive Steps to Take

• Resist slogans.
• Question program evaluations and ungrounded claims.
• Ask for solid evidence on lifetime effectiveness.
• Use resources available at Heckmanequation.org.
• Stay engaged with new research: cehd.uchicago.edu.