



The Economic Analysis of Early Childhood Programs in Nebraska

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Purpose of Presentation

- Introduce current study on economic benefits of E/C in Nebraska;
- Highlight relevant indicators from review of literature to consider in future analyses;
- Provide information on methodology and approach for calculating cost savings;
- Highlight next steps in this research;
- Discuss meaningful indicators, and provide links to policy.

Purpose of Study

- Investments in early childhood programming and supports are increasingly recognized as important for the economic well-being of communities.
- There is a need for research that accurately captures and conveys the economic benefits of these investments, specifically for Nebraska.
- ***First Five Nebraska*** sponsored a preliminary study to:
 - Provide a partial snapshot of current EC benefits for Nebraska;
 - Propose methods for evaluating investments (i.e. present value, payback period, internal rate of return);
 - Determine key indicators to consider.

Key Indicators

- Identify broad areas where EC can benefit society, as well as specific indicators for consideration in Nebraska;
- Review of relevant literature;
 - 47 articles/ reports reviewed
- Summary completed for each article/ report;
- Preliminary list of indicators generated:
 - Child Indicators (Pre-Graduation)
 - Child Indicators (Post-Graduation)
 - Parent Indicators

Key Indicators – Child (Early)

Cognitive Development/ Academic Achievement

- Grade Retention/Repetition
- Special Education and Related Services/ Remedial Education
- Learning Disability
- Developmental Level/Developmental Delay
- Achievement Test Scores
- Mental Indices (IQ)
- Grades
- Attendance

Crime

- Juvenile arrest
- Petition to juvenile court

Behavioral/Socio-Emotional

- Behavior Problems
- Positive Behaviors
- Social Competence

Key Indicators – Child (Early)

Health/Well-Being

- Diagnosed with Physical Illness
- Sick days (school records)
- Injury
- Immunizations (Measles Shot, DTP Shot) Last Vaccination on Time
- Obesity (weight-for-height, BMI)
- Growth
- Fitness
- Health Service Use (Optometrist; ER Visits; Routine Doctor/Dental Checkup)
- Drug Use
- Child Maltreatment (Court and DCFS Reports)
 - Any indicated abuse or neglect
 - Any out of home placement

Interaction with Educational System

- Teacher turnover, absenteeism

Key Indicators – Child (Later)

Attainment of Education, Skills and Abilities

- Highest Grade Completed
- High School Completion
- On-Time High School Graduation
- Attended Some College
- College Degree
- Skilled Employment

Socio-Economic Status

- Current employment/full time employment
- Occupational prestige
- Income/Earnings
- Marital status
- Number of Children
- Teen Parenthood (<20)
- Receipt of Public Assistance (welfare, child care subsidy, food stamps)

Key Indicators – Child (Later)

Health

- Mental Health (Depression)
- Health Status (Deceased, disability, diabetes, hypertension, obesity, asthma)
- Health Behaviors/Health Services Use
- Traffic Safety
- Substance Use
- Preventative Medical Care
- Any health insurance coverage (public, private)
- Urgent Care use
- Has a primary care doctor
- No physician visit at age 27, age 40
- No dental visit
- No eye doctor visit
- Hospitalizations

Key Indicators – Child (Later)

Crime

- Booked or charged with a crime
- Any arrest
- Any conviction (misdemeanor or felony conviction)
- Any incarceration or jail

Key Indicators - Parents

Educational Attainment/ Job Training

- Likelihood of single mothers engaging in education and job training

Earnings/Employment

- Income
- Mother's number of months employed; reduced job absenteeism
- Months using welfare and food stamps

Health/Well-Being (Mother)

- Mental Health
- Miscarriages
- Birth Weight
- Birth Spacing/ Subsequent number of pregnancies
- Domestic Violence
- Length of relationship with current partner

Methods

- Need approach for computing cost savings for Nebraska-specific programs.
- Drs. Eric Thompson and David Rosenbaum

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Outline

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- Education spending as an Investment
- Research on Economic Issues Surrounding Early Childhood Education: the Michigan Study
- Spending on “Quality” Early Care and Education

Education Spending as an Investment

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- Annual spending on education is a form of investment, yielding higher future earnings and averting future costs
- “Spending” comes in many forms, however:
 - Parent payment for tuition
 - Parent time, such as transporting students to early care
 - Public subsidies or provision of early care and education
 - In-kind donations by provider organizations
- When calculating the “return on investment” or “present value,” it is important to consider all of these types of investments

Return on Investment

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- A recent study examined return on investment of public early care spending: *Return on Cost Savings Analysis of School Readiness in Michigan (2009)*, prepared by the Early Childhood Investment Corporation
- Study examined the return on investment from high quality early care programs. Returns from:
 - Reduced K-12 spending
 - Savings for Society
 - Increased earnings
- Return on investment from public spending

Return on Investment

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- Reduced K-12 Spending – Access to early care and education means better preparation for primary school, and savings in delivery, in particular
 - Reduced enrollment in special education
 - Fewer students repeating grades

Reduced K-12 Spending

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- **Reduced enrollment in special education:**
 - Availability of universal high quality early care and education programs would yield a 14.6% reduction in students in special education (ECIC, 2009)
 - Marginal cost of a year of special education classes compared to other classes is estimated at \$3,300 per year
 - There are 47,000 Nebraska students enrolled in special education (Nebraska Department of Education)

Reduced K-12 Spending

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- **Fewer students repeating grades:**
 - Availability of universal high quality early care and education programs would yield a 19.2% reduction in students repeating a grade (ECIC, 2009)
 - The cost per a year of schooling is \$10,400
 - There are 45,000 Nebraska students who repeat a grade each year (Nebraska Department of Education)

Savings for Society

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- Savings for society refers to lower spending on social programs and law enforcement since students in ECE are less likely to impose these costs
 - Crime reduction
 - Alcohol and drug abuse
 - Child care

Savings for Society

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- Savings per \$1 in public spending on high quality early care and education (ECIC, 2009)
 - \$1 spending on ECE yields \$0.69 reduction in the cost of crime, both to victims and to the justice system
 - \$1 spending on ECE yields a \$0.04 reduction in spending in response to juvenile substance abuse problems
 - Each \$1 spending on ECE yields a \$0.22 reduction in public spending on the child care subsidy program
- Based on the categories above \$1 spent on ECE yields \$0.95 in savings

Increased Earnings

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- ECE programs increase worker earnings in both the short-run and the long-run
 - In the short-run, parents of children enrolled in ECE have more opportunity to work and earn
 - In the long-run, students in ECE programs having higher earnings as adults

Increased Earnings

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- Savings per \$1 in public spending on high quality early care and education (ECIC, 2009)
 - In the short-run, \$1 in spending on ECE yields a \$0.44 increase in mothers' earnings
 - In the long-run, \$1 in spending on ECE yields a \$1.23 increase in the present value of lifetime earnings of children participating in the program
- In total, \$1 spent on ECE yields an additional \$1.67 in the present value earnings

In Total

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- In total, each \$1 in public spending on high quality early care and education (ECE) yields nearly \$3 in savings for schools or society, or in increased earnings
- Caveats
 - Further analysis is appropriate
 - This is per \$1 of public spending. The return is less if other, complementary spending and time investment is considered
 - The returns to public investment in other quality levels of ECE was not measured in this study

Public Spending in Early Care and Education

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- **High Quality ECE**

○ Early Childhood Grant Program	\$3.4 million
○ Nurse Home Visitation	\$1.3 million
○ Public-Private Partnership	\$3.1 million
○ Office of Early Childhood	<u>\$3.1 million</u>
	\$10.9 million

- **Mixed Quality ECE**

○ General Fund Tax Credit	\$41.8 million
○ CCDF	\$24.1 million
○ TANF	\$17.0 million
○ ARRA	<u>\$3.2 million</u>
	\$86.1 million

Potential for Growth

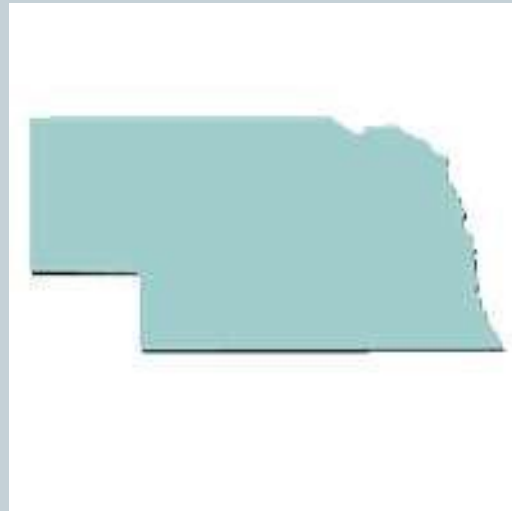
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- Our analysis suggests that returns from high quality investment in early care and education are large relative to the cost of investment
- However, a significant share of public investment in ECE is through child care tax credits or subsidy, and the myriad of providers serving children using the credit provide a mixed group of ECE programs
- There may be gains to the economy from policies that encourage a larger share of these providers to offer high quality ECE

Next Steps:



- Identify final list of key indicators;
- Identify possible data sources;
- Calculate cost savings for Nebraska.



Conclusions



- Early childhood education and programming can be considered from an economic, as well as an educational perspective. ECE helps **grow the economy** by supporting the positive development of children and families. There are measurable financial benefits to society from investing in ECE.
- There are multiple indicators that can be used to measure the economic benefit of ECE, including early child indicators (i.e. cognitive and socioemotional gains, crime reduction, health), later child indicators (i.e. educational attainment, SES, crime, health), and parent indicators (i.e. job training, earnings, health).
- Interdisciplinary research teams are beneficial for answering unique policy questions.

Discussion



- Which indicators are most relevant for Nebraska? Why?
- Are there additional social benefits we should consider?
- What are particular strengths in Nebraska? What ties most closely to our early childhood programming?
- What data sources are available?
- What percentage of private providers are providing high quality early care or close to high quality?

Thank you!



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