



The Economic Impact of Early Childhood Education and Programming in Nebraska

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Purpose of Presentation

- Introduce current study on economic benefits of E/C in Nebraska;
- Quantify a variety of benefits and costs associated with providing high quality early childhood education (ECE) to at-risk children in Nebraska;
- Share three measures of economic impact;
- Discuss conclusions, 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 have been numerous studies on the effects ECE may have on proximal and distal student outcomes. However, the impact and quality of ECE programs varies widely (NBER, 2004), and costs of education are highly localized.
- There is a need for research that accurately captures and conveys the economic benefits of these investments, specifically for Nebraska.

Purpose of Study

- ***First Five Nebraska*** sponsored a study to produce a preliminary analysis of the costs and benefits of early childhood education programs for at-risk Nebraska students.
 - National studies on the effect of ECE on student performance, coupled with Nebraska cost and demographic data were used.
- In 2009-10, 14 of Nebraska's 253 public high school districts located in 11 counties accounted for 72% of the state's dropouts from public high school (NCCPE, 2011).
 - *Adams, Dakota, Dawson, Dodge, Douglas, Hall, Knox, Lancaster, Lincoln, Scotts Bluff, Thurston counties*

Estimates of Costs and Benefits

Costs of ECE

- **Cost of ECE**

- Computed using cost information included in the *State of Preschool* from the National Institute for Early Education Research (NIEER; Barnett et al., 2011, 2012).
- In 2011, the reported per child cost of providing Head Start was \$9,446 and in 2012 the cost was \$6,983 (part-day estimates) The 2011-12 costs were averaged for a total of \$8,214 for part-day EC programming. For full day programming, 30% of the total cost for part day was added.

- **Parent travel costs**

- Monetary costs of travel and parent time.
- The average round-trip travel cost was \$8.69 per day in our 11 counties after adjusting for children who are bused.
 - *The average annual parent travel cost per enrolled student is \$2,147 for full-time ECE programs and \$1,288 for part-time ECE programs.*

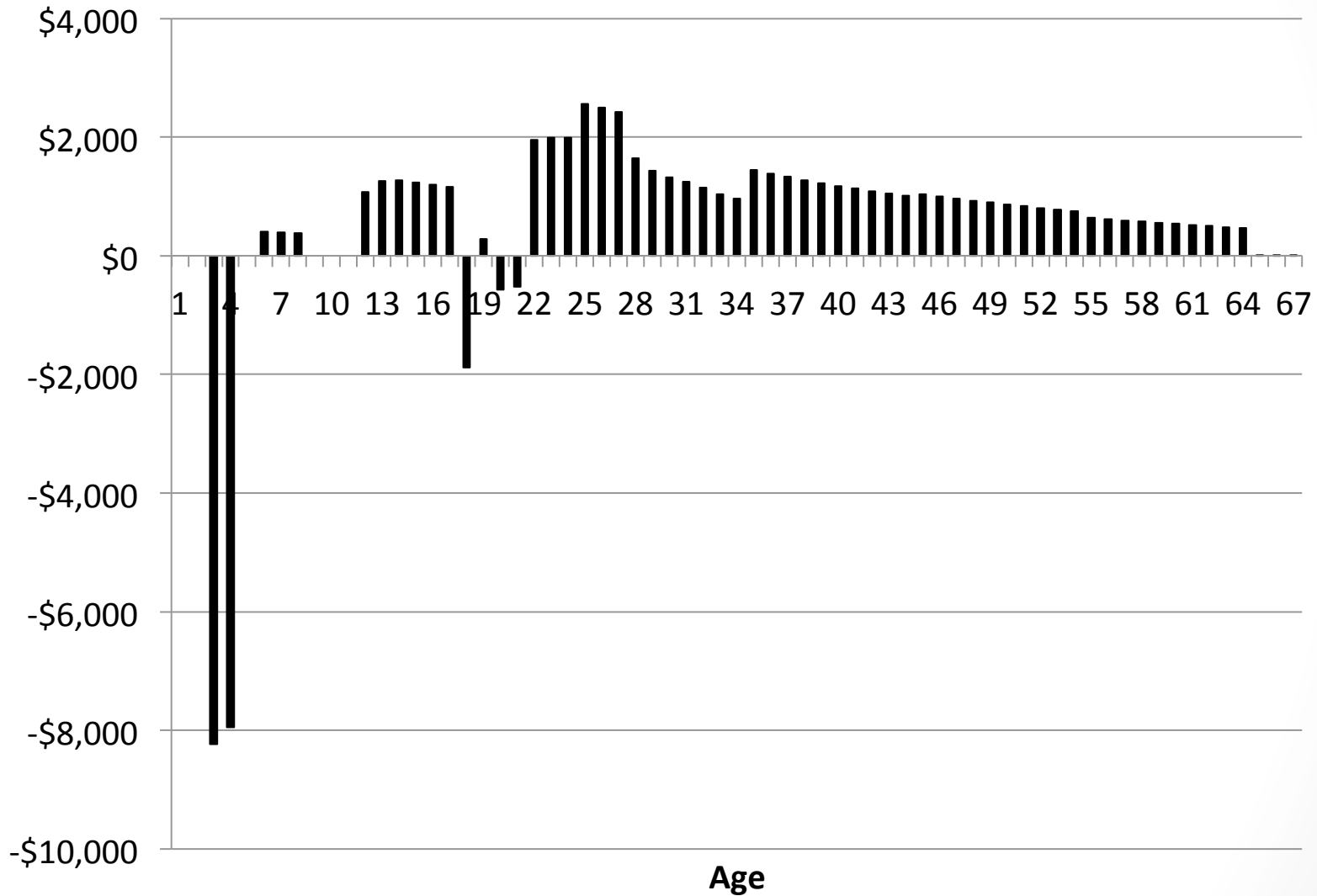
Benefits of ECE

- **Five specific benefit categories were considered:**
 - increased parent earnings;
 - reduced grade retention;
 - reduced enrollment in special education;
 - increased income as an adult; an
 - reduced juvenile and adult crime.

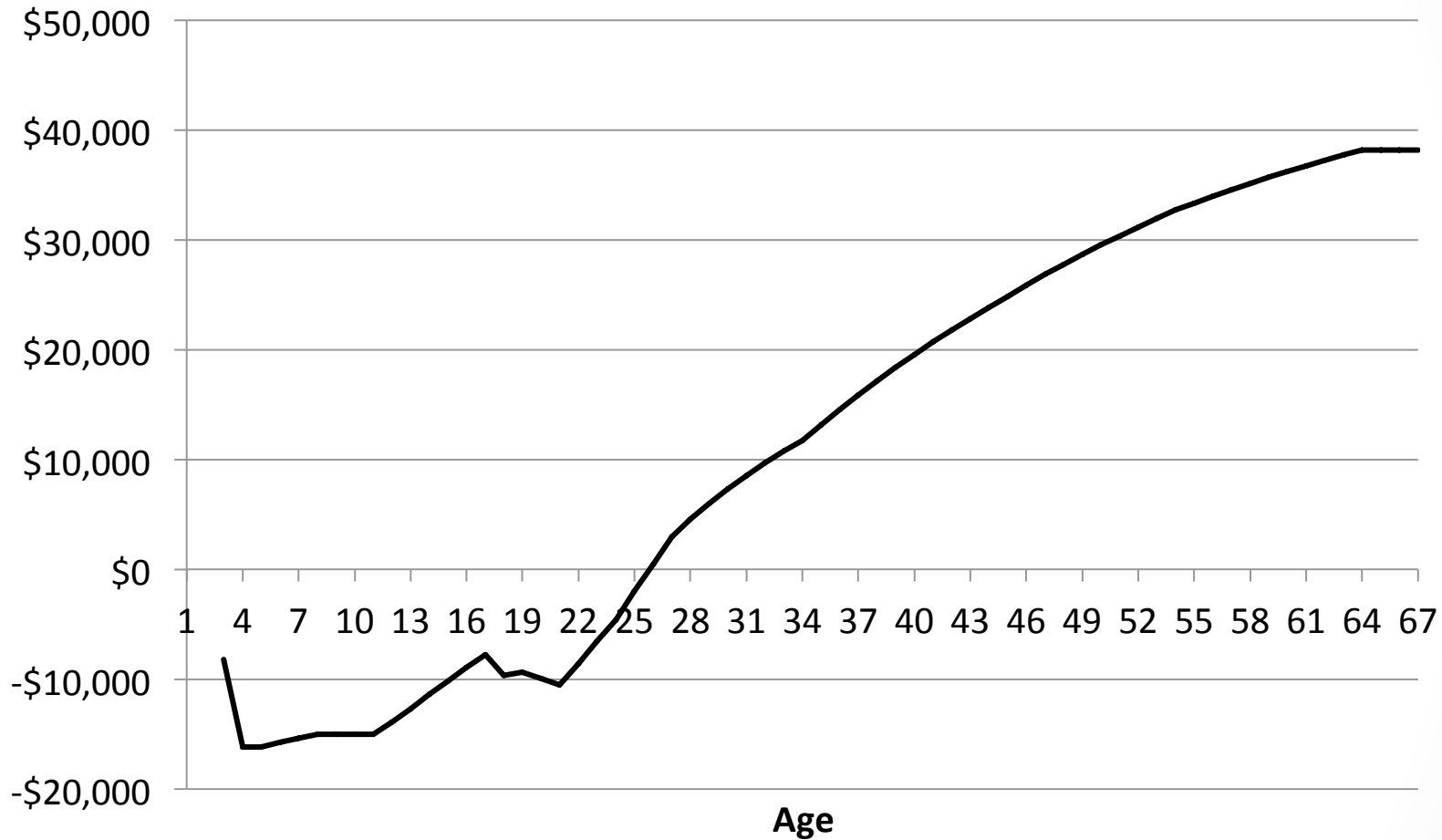
Age	Increase in Income	Grade Retention	Special Education	Crime Reduction	Increased Parent Earning	Total	PDV Benefit
3					\$4,594	\$4,594	\$4,594
4					\$4,594	\$4,594	\$4,438
⋮							
6			\$453			\$453	\$408
7			\$453			\$453	\$395
8			\$453			\$453	\$381
⋮							
12				\$1,466		\$1,466	\$1,076
⋮				⋮		⋮	⋮
15				\$1,870		\$1,870	\$1,238
⋮				⋮		⋮	⋮
19	-\$4,893	\$3,272		\$2,118		\$497	\$286
20	-\$3,325			\$2,300		-\$1,024	-\$571
⋮	⋮			⋮		⋮	⋮
25	\$2,514			\$2,951		\$5,465	\$2,564
⋮	⋮			⋮		⋮	⋮
30	\$2,514			\$822		\$3,336	\$1,318
⋮	⋮			⋮		⋮	⋮
35	\$4,115			\$231		\$4,346	\$1,446
⋮	⋮			⋮		⋮	⋮
40	\$4,115			\$82		\$4,198	\$1,175
⋮	⋮			⋮		⋮	⋮
50	\$4,352			\$11		\$4,363	\$866
⋮	⋮			⋮		⋮	⋮
60	\$3,819			\$1		\$3,820	\$538
Aggregate	\$135,189	\$3,272	\$1,359	\$42,893	\$9,187	\$191,899	\$63,411

Examining the total costs and benefits of providing ECE in Nebraska shows significant long-term economic benefits.

Annual Net Benefit



Aggregate Net Benefit



Providing a child with early childhood education produces outcomes over their lifetime with a current net value of almost \$40,000.

Impacts of High Quality ECE

Three measures of impact were developed:

- The benefit/cost ratio which shows the benefit associated with each dollar of cost;
- The internal rate of return which measures the return associated with the initial investment in ECE;
- The payback period which shows how long it takes to gain back the initial investment in ECE.

	<i>Full-Time</i>	<i>Part-Time</i>
Benefit/Cost Ratio ⁺	2.50	3.23
Internal Rate of Return (IRR)	9.63%	8.54%
Payback Period	22 years	24 years

⁺ Comparable to other available estimates

(Major EC programs = 2.5 to 12.9; other state programs = .68 to 3.5)

Summary

What information resulted from this investigation?

What are the key take-away points?

- ECE can be thought of as an investment in a child's future, and the return on that investment can be measured.
- Investment in early childhood education in Nebraska results in positive economic return.
 - The cost/benefit ratio suggest that every dollar invested in ECE returns at least \$2.50.
 - The internal rate of return on the ECE investment is about 9%, similar to an investment in the stock market.
 - While the payback period is long (22 years), benefits begin accruing as early as age 5.

“[S]kill formation is dynamic in nature. Skill begets skill; motivation begets motivation ... The longer society waits to intervene in the life cycle of a disadvantaged child, the more costly it is to remediate disadvantage.”

-James J. Heckman

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