

Promoting Health Equity through Education Programs and Policies: Full-Day Kindergarten Programs

Summary Evidence Table - Economic Review

Study	Study Characteristics	Intervention Costs (2009 US\$)	Intervention Benefits (2009 US\$)	Economic Summary Measure (2009 US\$)
<p>Author (Year): Aos (2007)</p> <p>Study Design: Human capital Model</p> <p>Economic Method: Cost-Benefit Analysis</p>	<p>Location: Washington State</p> <p>Sample Size: NA</p> <p>Population: 72,824 public kindergarten students</p> <p>Time Horizon: Life cycle earnings</p>	<p>Includes teacher salaries and benefits; capital expenses</p> <p>FDK would cost about \$2778 more per child – a 130% increase in cost per student to expand from HDK to FDK.</p>	<p>Assuming availability of appropriate public policies to sustain the early gains in test scores to the end of the high school, the estimated present value of benefits (to age 65 Years) per student was \$5958.</p>	<p>Costs of programs to sustain the gains must be added to the extra cost per student for FDK to calculate the ROI.</p>
<p>Author (Year): Brewster (2002)</p> <p>Study Design: NA</p> <p>Cites results from the unpublished study by Weiss and Offenberg</p> <p>Economic Method: Benefit Analysis</p>	<p>Location: Philadelphia</p> <p>Sample Size: NA</p> <p>Population: 17,600 children</p> <p>Time Horizon: 1 year</p>	<p>NR</p>	<p>Lower grade retention</p> <p>Philadelphia’s FDK classes shaved close to 19% of the cost of providing them, due to lower retention rates for full-day graduates—\$2.6 million for every 1,000 kindergartners.</p>	<p>NR</p>
<p>Author (Year): Cannon (2006)</p> <p>Study Design: Econometric Regression Modeling</p> <p>Economic Method: Benefit Analysis</p>	<p>Location: Nationally representative data from the Early Childhood Longitudinal Study-Kindergarten Class of 1988-1999 (ECLS-K)</p> <p>Sample Size: Baseline sample of 8,540 children</p>	<p>NR</p>	<p>Increase in the full-time employment of mothers in the kindergarten years associated with children’s attendance of FDK, which would raise household income and tax revenue to society.</p>	<p>NR</p>

Study	Study Characteristics	Intervention Costs (2009 US\$)	Intervention Benefits (2009 US\$)	Economic Summary Measure (2009 US\$)
	<p>Population: 22,000 children in about 1,000 kindergarten programs</p> <p>Time Horizon: 1 year</p>			
<p>Author (Year): DeCicca (2007)</p> <p>Study Design: NA</p> <p>Uses information from the Ohio’s Office of Education Oversight (1997)</p> <p>Economic Method: Cost</p>	<p>Location: Ohio</p> <p>Sample Size: NA</p> <p>Population: Children</p> <p>Time Horizon: NA</p>	<p>Teacher salaries and benefits; instructional, library, and other materials</p> <p>FDK costs over 70% more than traditional HDK in terms of per-pupil expenditure.</p>	<p>FDK doubles the number of teachers compared to HDK but the cost increase is less than double because of savings in transportation costs.</p>	<p>NR</p>
<p>Author (Year): Lee (2005)</p> <p>Study Design: NA</p> <p>Uses information from the Puelo (1988) study</p> <p>Economic Method: Cost</p>	<p>Location: Wisconsin</p> <p>Sample Size: NA</p> <p>Population: Kindergarten children</p> <p>Time Horizon: 2 years</p>	<p>Teacher salaries and benefits; instructional, library, and other materials; teacher aides</p> <p>Wisconsin State Dept. of Public Instruction estimated 20-24% additional costs for FDK over HDK during 1980-81 and 1982-83.</p>	<p>Transportation – with full-day kindergarten, schools only need to bus children twice per day instead of four times per day when operating morning and afternoon sessions of half-day kindergarten.</p>	<p>NR</p>
<p>Author (Year): Stone (2006)</p> <p>Study Design: Model</p> <p>Economic Method: Cost-Effectiveness Analysis</p>	<p>Location: Manheim County (Pennsylvania)</p> <p>Sample: Number of Kindergarteners from a total student population of about 3,100</p>	<p>Teacher salaries and benefits</p> <p>In 2000-2001 school year, Manheim county had 1 FDK and 9 HDKs. Cost per student was \$2018 in HDK and \$4481 in FDK (122% increase). The cost narrowed down \$1273 in 2002-</p>	<p>Relative increase in the number of students scoring proficient on the end-of-year Developmental Reading Assessment</p>	<p>In 2000-2001, the cost-effectiveness per student scoring proficient on the end-of-year Developmental Reading Assessment was \$2790 in HDK and \$4745 for FDK. The difference between the cost-effectiveness ratios steadily</p>

Study	Study Characteristics	Intervention Costs (2009 US\$)	Intervention Benefits (2009 US\$)	Economic Summary Measure (2009 US\$)
	Time horizon: 5 year starting from 200-2001school year	2003 (45% increase) when there were 6 FDKs and 4 HDKs.		improved as the county increased FDK offerings throughout the first 3 years

NA: Not Applicable

NR: Not Reported