Investment in early childhood programs yields robust returns

Prof. James Heckman finds 13 percent annual return benefiting students, parents

High-quality early childhood development programs can deliver an annual return of 13 percent per child on upfront costs through better outcomes in education, health, employment and social behavior in the decades that follow, according to a new study by Nobel-winning economist James Heckman and researchers at the University of Chicago and University of Southern California.

The researchers analyzed the long-term effects of two identical, random-controlled preschool studies conducted in North Carolina in the early 1970s: The Carolina Abecedarian Project and the Carolina Approach to Responsive Education. The programs provided comprehensive programing to disadvantaged children, and both studies have long-term follow-ups through about age 35.

The findings, released Monday in a working paper titled "The Lifecycle Benefits of an Influential Early Childhood Program," show how high-quality programs can reduce taxpayer costs, improve economic prospects for parents and provide enduring benefits for children well into adulthood.

"The data speaks for itself," said Heckman, the Henry Schultz Distinguished Service Professor and director of the Center for the Economics of Human Development. "Investing in the continuum of learning from birth to age 5 not only impacts each child, but it also strengthens our country's workforce today and prepares future generations to be competitive in the global economy tomorrow."

In previous work, Heckman established a 7 percent to 10 percent return on investment based on analysis of the Perry Preschool program, which served 3- and 4-year-olds. The two North Carolina programs analyzed in the most recent research spanned from birth to age 5 and combined health, nutrition, family engagement, child care and early learning.

The researchers calculated the return on investment through life outcomes, such as health, involvement in crime, labor income, IQ and increases in mothers' labor income as a result of subsidized childcare. The paper estimates the investment in high-quality programs returns 13 percent per child annually—a rate of return that's comparable to returns on a savings account or the stock market.

The study relies on data collected annually from birth until the age of 8 and then at various points in adolescence and adulthood. It includes data on cognitive skills, education and family economic characteristics as well as a full medical survey at age 35 and detailed records of any criminal activity.

For those who were enrolled in the high-quality early child programs, the beneficial outcomes included improved adult health, particularly the reduction among males in metabolic syndrome, which raises the risks for heart disease, diabetes and other health problems. The researchers also found that children in the two programs saw a permanent boost in IQ.

"No one category by itself drives the high return that we estimate; it's the overall effect across outcomes that are measured throughout the life cycle," said co-author Jorge Luis García, a doctoral student at UChicago.

The findings show how high-quality early childhood programs can increase economic mobility for two generations by freeing working parents to build their careers and increase wages over time, Heckman said, while their children develop a broad range of foundational skills that lead to lifelong success.

Heckman and García conducted the research with Duncan Ermini Leaf of the Leonard D. Schaeffer Center for Health Policy and Economics at the University of Southern California; and María José Prados, of the University of Southern California's Dornsife Center for Economic and Social Research. The research was funded by the Buffett Early Childhood Fund, Pritzker Children's Initiative and the Robert Wood Johnson Foundation's Policies for Action program.