

# The Heckman Equation



## There's more to gain by taking a comprehensive approach to early childhood development.

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*Start at birth, coordinate services into comprehensive early childhood programs and achieve greater economic and social gains. Professor Heckman's latest research, "The Lifecycle Benefits of an Influential Early Childhood Program," shows that high quality birth-to-five programs for disadvantaged children can deliver a 13% per year return on investment—a rate substantially higher than the 7-10% return previously established for preschool programs serving 3- to 4-year-olds. Heckman, his University of Chicago colleague Jorge Luis García, Duncan Ermini Leaf of the Leonard D. Schaeffer Center for Health Policy and Economics at University of Southern California, and María José Prados of the Dornsife Center for Economic and Social Research at University of Southern California, find that significant gains are realized through better outcomes in education, health, social behaviors and employment.*

### A past program that's very relevant today.

*Lifecycle Benefits* analyzes the effects of two identical, randomized-controlled preschool experiments conducted in North Carolina in the 1970's: The Carolina Abecedarian Project (ABC) and the Carolina Approach to Responsive Education (CARE). They offered comprehensive developmental resources to disadvantaged African-American children from birth to age five, including nutrition, access to healthcare and early learning. Children were randomly assigned into either the treatment group or a control group that had access to alternatives such as lower quality center-based care or in-home care. Given that many high-quality programs today include the components central to ABC/CARE, evidence from ABC/CARE is relevant today. About 19% of all African-American children would be eligible for the program today. And, research shows that the negative effects of a disadvantaged early childhood are similar across races.

### Rich data provides insight into long-term benefits.

Existing research on the effectiveness of early childhood programs largely focuses on short-term academic gains when it is long-term benefits that provide a more relevant measure of value. *Lifecycle Benefits* analyzes a wide variety of life outcomes, such as health, the quality of life, participation in crime, labor income, IQ, schooling and increases in mothers' labor income as a result of subsidized childcare. ABC/CARE collected data on the participants throughout childhood and well into adulthood, allowing for an in-depth analysis of long-term effects in multiple dimensions of human development. From birth until the age of 8, data were collected annually on cognitive and socio-emotional skills, home environments, family structure, and family economic characteristics. After age 8, data on cognitive and socio-emotional skills, education, and family economic characteristics were collected at ages 12, 15, 21, and 30. In addition, there is a full medical survey at age 35 and detailed records of any criminal activity.

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## The benefits of high quality starting at birth.

Children who received treatment had significantly better life outcomes than those who did not receive center-based care or those who received lower quality care. 75% of the control group children were enrolled in relatively low quality alternative childcare centers, usually after age 3; others stayed at home. Consistent with other research, results varied by gender. For females, ABC/CARE had positive effects on high school graduation, years of education, adult employment and the adult labor incomes of participants and their parents. These treatment results are higher when compared with the alternative of staying exclusively at home. The results for males show lower drug use and blood pressure, as well as positive effects on education and later labor income. The results for employment, hypertension, and blood pressure are higher when the treatment group is compared to the children who attended alternative childcare centers. Separation from the mother and being placed in relatively low quality childcare centers have far more negative consequences for male subjects than for female ones. This suggests that high program quality is necessary to generate quality outcomes.

## A two-generation effect on workforce.

ABC/CARE improved the economic prospects of treated children and their mothers, allowing the latter to enter the workforce and increase earnings while their children gained the foundational skills to make them more productive in the future workforce. ABC/CARE provided childcare to the parents of treated children for more than nine hours a day for five years. Only 27% of mothers of children lived with a partner and this status barely changed during the program, making employment critical for upward mobility. Childcare generates positive effects in maternal education, labor force participation, and parental income.

## Comprehensive quality care pays off.

While the costs of comprehensive early childhood education are high, the rate of return of programs like ABC/CARE imply that these costs are good investments. Every dollar spent on high quality, birth-to-five programs for disadvantaged children delivers a 13% per annum return on investment. These economically significant returns account for the welfare costs of taxation to finance the program and survive a battery of sensitivity analyses. The cost of ABC/CARE was \$18,514 in 2014 U.S. dollars. The average cost of childcare alone in the United States ranges from \$9,589 to a high of \$23,354 with few assurances of the quality necessary to generate quality life outcomes for children.<sup>1</sup>

## A call to do more and better for disadvantaged children.

Child poverty is growing in the United States; investing in comprehensive birth-to-five early childhood education is a powerful and cost-effective way to mitigate its negative consequences on child development and adult opportunity. Elements of the ABC/CARE program exist today through a number of often disjointed home visiting, child well-being, nutrition, early learning, childcare and preschool programs. Policymakers would be wise to coordinate these early childhood resources into a scaffolding of developmental support for disadvantaged children and provide access to all in need. The gains are significant because quality programs pay for themselves many times over. The cost of inaction is a tragic loss of human and economic potential that we cannot afford.

<sup>1</sup> Schulte, Brigid, and Alieza Durana. "The New America Care Report." Better Life Lab (2016): 1-104. Web. 29 Nov. 2016.

García, Jorge Luis, James J. Heckman, Duncan Ermini Leaf, and María José Prados. "The Life-cycle Benefits of an Influential Early Childhood Program." (2016): n. pag. Web.

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