

The Lifecycle Benefits of an Influential Early Childhood Program **Frequently Asked Questions**

- 1. Why is the ROI higher? How did Professor Heckman and his colleagues arrive at the 13% figure?**
 - The previous ROI of 7-10% was based on Heckman's analysis of the Perry Preschool program, which served three- and four-year-olds. ABC/CARE was a comprehensive program from birth to age five that, while initially more expensive, produced better education, health, social and economic outcomes; hence, the higher return on investment.
 - The ABC ROI is higher because this is the first time that health benefits were calculated to determine the economic value of better health outcomes that were driven by ABC treatment. This was made possible by Heckman's previous analysis of adult health outcomes at age 35. Those beneficial adult health outcomes, particularly the reduction in metabolic syndrome among males, were quantified and valued by his colleagues at the USC Schaeffer Center.
 - ROI is also higher due to the calculation of the economic value of helping mothers enter the workforce. The researchers quantified the economic gains of mothers due to the availability of child care and figured that into the return on investment. ABC/CARE stands as evidence of a two-generation solution for economic mobility and that value is reflected in the higher ROI.
 - Better adult outcomes produce better returns on investment. One contributor was the fact that ABC/CARE was one of the few programs that permanently boosted IQ. That lasting effect in cognition, combined with increased social and emotional skills that are known to drive achievement, were factors in better outcomes and returns on investment.
- 2. The 13% figure is males and females combined. When you break it down by gender, its 14% ROI for boys but only 10% for girls. What accounts for the difference?**
 - Differences in outcomes by gender is very common among all early childhood experiments. Males tend to make greater gains because early childhood development focuses on building social and emotional skills and executive functioning—skills that tend to come more naturally to females. In addition, females tend to be less involved in crime and anti-social behavior generally, so the return on reduced criminality is higher for males. Also, females in general tend to have healthier behaviors than males unless there is some form of early or late intervention with males.
 - There is still a significant gain for females and that should not be discounted. Note that the only 10% return for females mentioned above is well above the average return on investment in the marketplace *and* the high point of the Perry 7-10% return on investment. If we are going to talk about relative weight, let's weigh it against the context. A 10% return is not insignificant.
 - The combined 13% return is a driver for all disadvantaged children, as it represents an effective way to address poverty across genders and across two generations (parents and children).

3. Also, there is the cost ratio figure, 6.3, that is mentioned in the paper in conjunction with the 13% number. What is the relationship between these two numbers?

- The 6.3 is the cost/benefit ratio; the 13% is the return on investment. The cost/benefit gives you the dollar figure on investment; the 13% gives you the per annum return on investment that compounds over time. There has long been confusion about the dollar value of the return. For example, people confuse the Perry investment as \$7 for every dollar invested, when the true return is 7% on every dollar. So, the cost/benefit ratio is \$6.30 for each \$1 invested, while the rate of return is 13% per annum per child compounding. The percentage is preferred because it is a more accurate reflection of value and the accrual of value in a long-term investment.

4. What makes ABC/CARE high quality? What are the key components of the program that drive the cost?

- It starts at birth and operates in accordance with the developmental science of skill begetting skill. The achievement gap opens long before preschool begins at 4; the higher return for an earlier, more comprehensive program reflects the value of skill begetting skill.
- ABC/CARE used a developmental education model that was administered by professionals trained in early childhood development. A professional early childhood workforce with a developmentally appropriate curriculum is key to getting better outcomes and higher returns on investment.
- The curriculum focused on developing the whole child, not just cognition. Although the original study focused on raising IQ and later school achievement, it was widely felt that such outcomes would be derived by focusing on developing social and emotional skills first with age-appropriate cognitive development integrated into that nurturing approach. “Academic learning” happened within the context of developing a wide range of social/emotional and cognitive skills in children.
- Health and nutrition as inputs were part of the quality in this program. Nurses were on staff, children had developmental screenings and a doctor would refer children for treatment based on mental, motor and physical diagnoses. This was the only early childhood program to have this feature and Heckman believes it figured largely in better health outcomes later in life. In addition, children were provided with meals and snacks to meet nutritional needs that they may not have received at home. The inclusion of health and nutrition and the resulting outcomes are critically important and should be kept in mind when policymakers think of reducing access to health and food stamps for children and families. Health, nutrition and early learning are all one thing.

5. How can we pay for this if the current \$10k average price tag for child care is already too high?

- First, the type of program this paper evaluates does not reflect that much more money to provide comprehensive, high quality early childhood education, especially if you factor in the cost of health care and nutrition that is spent outside of child care. The government and

parents are likely to already be spending as much, or more, in disjointed services and programs than the total cost of the comprehensive approach found in ABC.

- The focus should be on value, not cost. Here you get more than what you pay for. Investing in access to low quality day care and preschool will not produce the same outcomes and returns; investing in high quality day care and preschool has high returns. The cost is more than paid for by short- and long-term outcomes.
 - Less intensive and expensive versions of ABC/CARE have been implemented by states with excellent results. North Carolina's implementation of Smart Start and NC Pre-K is a prime example. A recent study by Kenneth Dodge at Duke University found lasting gains in IQ through the fifth grade with lasting gains in reading and math through the fifth grade. While academic achievement alone is not a predictor of adult success, the results of the Smart Start and NC Pre-K study reinforce the long-term findings of ABC/CARE.
- 6. This study is based on a small sample size of treated children; how can we be sure that the effects shown among this small group will be the same when treatment is brought to scale?**
- Most scientific experiments are done with relatively small sample sizes. It is harder to find differences in effects in smaller sample size experiments, so the great difference in outcomes between the treatment and control groups in ABC/CARE speaks to the power of the program.
 - Heckman and his research team went to great lengths to address criticisms of previous ABC analyses, running their findings through multiple sensitivity tests—with the results making no difference in the outcomes.
 - ABC came close to the ideal of randomization, but there were some inevitable compromises. Seven children in the treatment group did not comply with their initial assignment and failed to participate; and, one child in the control group switched to treatment. In addition, some families moved and a relative few abandoned the study at a later date. The beneficial effects of ABC withstand the scrutiny of these compromises.
 - Heckman and his co-authors adjusted for non-compliance of the six treatment subjects and found that it made little difference in the assessment of outcomes. They assigned the lowest treatment score to the non-complying subjects for whom no data are available, and found that the mean difference between treatment and control remains sizable and not significantly different from the baseline subjects who complied with treatment. Similar adjustments for those who moved or abandoned the program produced no significant change that would call into question the beneficial effects of treatment.
- 7. ABC/CARE was a very intensive and expensive program; can such programs be brought to scale to produce similar outcomes?**
- The expense of comprehensive high quality programs such as ABC/CARE has led many to assume that their results cannot be duplicated outside of a small experimental setting. Such assumptions are not supported by the evidence.

- The program components found in ABC/CARE have been duplicated in whole or part by subsequent public and private programs, with the wide body of research showing that quality programs produce quality outcomes that more than pay for the initial cost of investment.
- A thorough review of government programs shows that all have a beneficial effect on disadvantaged children on many intermediate and long-term measures. The differences are especially stark when compared to no treatment at all and significant differences are found between the effects of high quality care and lower quality alternatives.¹
- More contemporary proof of the present applicability of ABC/CARE is the recent Duke Center for Child and Family Policy study of children who were treated through North Carolina's Smart Start and NC Pre-K programs, both of which are based on the ABC/CARE program and together represent its cohesive, birth-to-age-five approach.
- Researchers analyzed data on over one million North Carolina public school children who had been enrolled in the state's Smart Start and NC Pre-K programs. While data on long-term effects is not available, the intermediate outcomes through the fifth grade are encouraging.
- Children who participated in both programs had higher test scores, less grade retention and fewer special education placements. Like the ABC/CARE program, the Duke Center study shows that positive effects held steady and grew over the years. Treated children had significantly higher math and reading scores in grades three, four and five.

This research was funded by the Buffett Early Childhood Fund, Pritzker Children's Initiative and the Robert Wood Johnson Foundation's Policies for Action program.

¹ Elango, Sneha, Jorge Luis Garcia, James J. Heckman, and Andres Hojman. "Early Childhood Education." HeckmanEquation.org. University of Chicago, 4 Nov. 2015.