

INVEST IN A STRONG START FOR CHILDREN.

High Return on Investment

A common argument for supporting early childhood is that it is a good “investment.” Often, the term is used colloquially, meaning that early childhood is an area in which donors can make a positive difference, and that support is broadly beneficial for children. While the colloquial meaning of investment is certainly valid, when business people and economists talk about investment and return on investment in early childhood, they generally mean something more specific. This brief explores the notion of return on investment, and the rationale behind the economic and business case for spending on early childhood.

What does it mean to “invest” in early childhood?

In the strictly financial sense, an investment is an outlay of money from which one expects a return of some kind, in addition to the original amount allocated. The return on investment, or ROI, is a common performance measure used to evaluate and compare the efficiency of financial investments. Early childhood programs cost money, of course, but studies show that the benefits associated with such programs also come with monetary gains and savings. When the projected benefits exceed the projected costs, then these programs can be seen as “paying for themselves” and then some over time. In other words, the original investment generates a financial return.

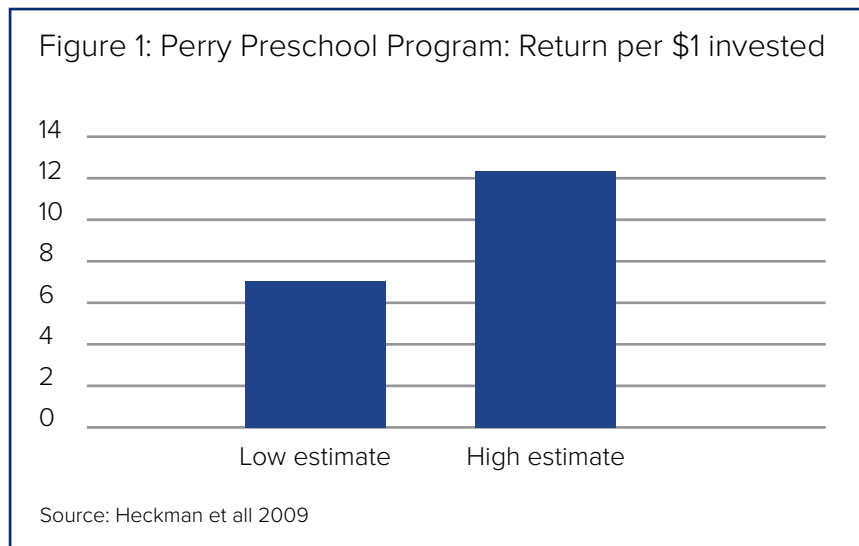
Who benefits from early childhood programs?

We all do. The primary beneficiaries are children and their parents. For example, if a low-income parent is able to secure a place for her child in a high quality daycare program, that child is likely to benefit from exposure to a wider array of learning opportunities than he or she might have at home. Enrolling her child in daycare may also open the door for the parent to take on employment or further her education in order to improve her career prospects. Those individual benefits can be substantial, and life-changing.

Other beneficiaries from such high quality daycare programs may include state and local government, and more broadly, taxpayers and society at large. Because high quality early childhood programs promote healthy development, they can generate savings by obviating the need for more expensive interventions later in a child’s life. For example, studies show that participation in high-quality early care can help children avoid special education, grade repetition, early parenthood, and incarceration – all outcomes that imply large costs for government and for society. Furthermore, children (over the long term) and parents who participate in such programs are more likely to be employed; thus revenue from their taxes and enhanced buying power can positively contribute to the economy.

How big are the returns to early childhood programs?

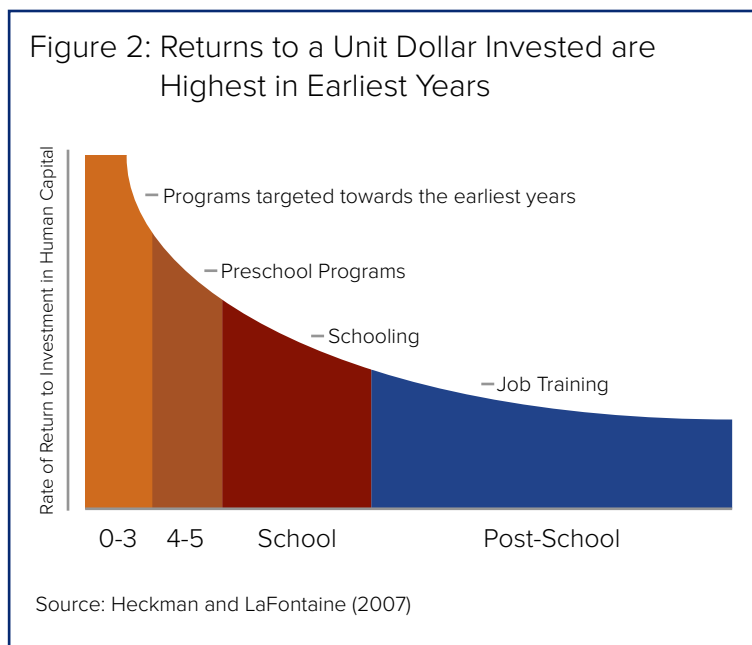
They can be large. For example, the [National Forum on Early Childhood Policy and Programs](#) has found that high quality early childhood programs can yield a \$4 - \$9 dollar return per \$1 invested. A 2009 study of Perry Preschool, a high-quality program for 3-5 year olds developed in Michigan in the 1960s, estimated a return to society of between about \$7 and \$12 for each \$1 invested (see Figure 1 below).¹ It is important to note that different assumptions can shift estimates and that different studies often rely on different assumptions, limiting comparisons across studies and programs. That said, early childhood stands out as a particularly notable area for investment precisely because so many interventions appear to save money in the longer term.



Do all early childhood programs provide the same benefits and returns?

No, there is a range. A landmark study of early childhood programs found that five out of seven programs for which they calculated costs and benefits had a positive cost-benefit ratio, but there was variance both in the benefits tracked and in returns among the five.²

There is also a school of thought that argues that investing earlier in a child's life yields higher returns on investment. Nobel Prize-winning economist James Heckman has written extensively on investments and early childhood, arguing (based on his own analysis of a range of programs) that returns on unit dollar invested are at least theoretically higher earliest in a child's life (See Figure 2).³



While earlier programs may generate the highest *potential* returns, donors that support children beyond age three nonetheless play an important role in sustaining and extending benefits, and there is good evidence that programs that target older age groups can also generate positive returns.

How are benefits or returns calculated?

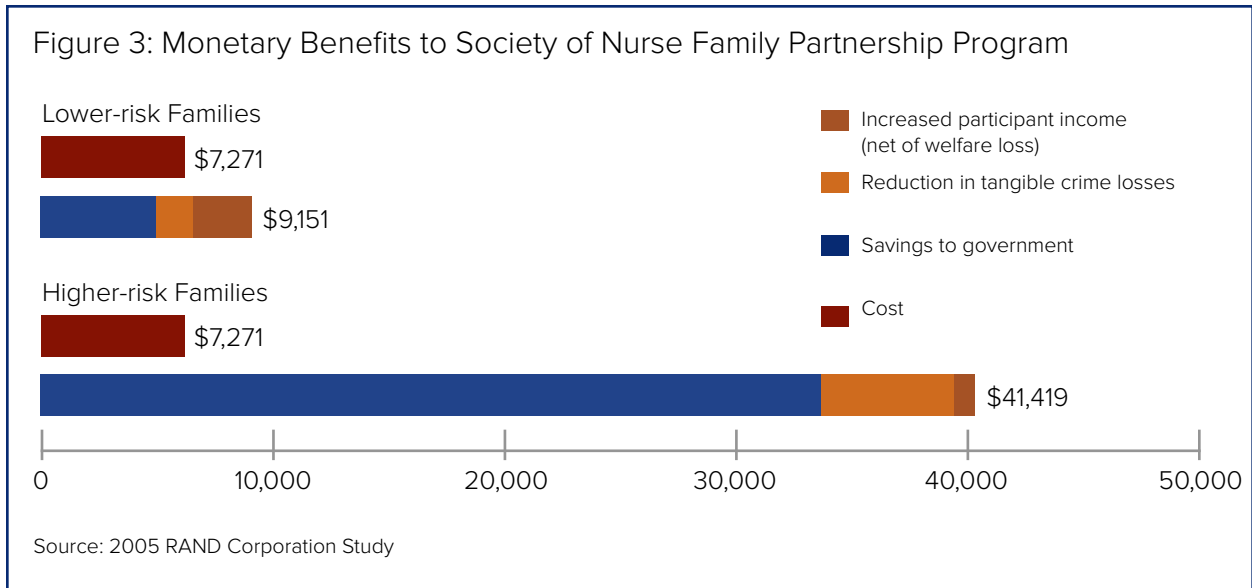
There are different ways to estimate the benefits associated with social programs (for more information, see papers from Melinda Tuan and Kilburn and Karoly, both linked in Additional Resources). Almost all rely on underlying program evaluation information that distinguishes the outcomes or results for participants in a program from outcomes typical of a similar group. Estimating the return on investment involves putting prices on actual or predicted outcomes,

in an attempt to link costs and benefits. In other words, these studies take often non-economic outcomes, and decide what they are “worth” in dollar terms. That said, some things are hard to put a price on, and there is often disagreement on how best to “monetize” non-economic benefits. For example, what is the “value” of a child’s love of reading (a benefit of some programs)? Other program outcomes may be easier to assign a price tag to. If a program reduces emergency room visits over a period of time by a certain percentage, for example, those cost savings can be fairly easily calculated.

How should I think about return on investment in choosing programs to support?

It can be helpful to compare potential programs based upon a common measure (e.g., cost benefit analysis or similar) when applied consistently.⁴ Organizations working towards unified metrics across programs include the **Robin Hood Foundation** in New York, as well as the **Washington State Institute for Public Policy**. Because underlying program goals and evaluation information available are often so varied, however, such comparisons are sometimes inappropriate. Here are some things that donors should keep in mind:

- Different programs often track different outcomes or benefits. One program may focus on improving children’s health, for example, while another looks primarily at education outcomes. Considering returns alone does not guarantee that you are getting the specific outcomes you may be looking for.
- When a program does not show a positive rate of return, it could be because: a) the program doesn’t work: it doesn’t generate the benefits it promises; b) the program does indeed produce the benefits promised, but at a sufficiently high cost that the benefits do not outweigh the costs; or c) the underlying assumptions about either costs or benefits are faulty, or the evaluation data that might support a more accurate assessment of benefits are missing. The last point, (c), could also be the case for a program claiming a positive rate of return, so investors should look carefully at the assumptions made and the quality of the evaluation data.
- Even the same program may have different returns based on the location or population targeted. For example, the returns on investment for the Nurse Family Partnership program are much higher for low-income, at-risk families than for the population generally (see Figure 3). Depending on what group you wish to serve, results from one study of a program may not be generalizable to a different context or group.



Keeping these caveats in mind, it is important for donors to consider the cost involved in different ways to tackle a problem, and looking at return on investment is one way of doing that. The Center’s use of a cost-per-impact analysis in the models we profile is meant to help donors get a sense of “bang for buck” while still distinguishing between different programs’ impact.

Additional Resources

Heckman Equation: Nobel Prize winning economist James Heckman has researched and written extensively on investments in early childhood. His website has a wealth of resources, both video and print, accessible to a general audience.

Towards Standardization of Benefit-Cost Analysis of Early Childhood Interventions: In this paper, RAND analyst Lynn Karoly discusses in detail some of the difficulties inherent in comparing costs and benefits of early childhood programs, provides an updated analysis of the cost and benefit of a subset of programs, and makes recommendations for the field for increasing the standardization of approaches.

The Economics of Early Childhood Policy: This paper from RAND outlines differing approaches to estimating economic returns, written for a more general audience of policy makers and others interested in early childhood.

Early Childhood Interventions: Proven Results, Future Promise: This RAND study from 2005 remains the most thorough review of impact and return on investment for 20 early childhood programs with good evaluation data.

Measuring and/or Estimating Social Value Creation: This paper, prepared by Center for High Impact Philanthropy senior fellow Melinda Tuan for the Bill and Melinda Gates Foundation in 2008, reviews eight approaches to integrating costs and benefits associated with social programs, including the Center's use of cost-per-impact analysis.

TEDX talk by Professor Larry Schweinhart on returns to high quality preschool: Dr. Schweinhart, President of the High Scope Educational Research Foundation, leads the evaluation of Perry Preschool, one of the most thoroughly studied high quality preschool programs.

The Business Case for Early Childhood Education: In this New York Times op-ed, John E. Pepper, former CEO of Procter & Gamble, and James Zimmerman, former CEO of Macy's, write about early childhood education benefits from a business perspective.

Michigan Early Childhood Investment Corporation: Business case for investment video: This video features interviews with business leaders about why they have chosen to support a public/private collaboration to increase investments in early childhood in the state.

Georgia Early Education Alliance for Ready Students (GEEARS) video: This short animated video makes a great overall case for investment in early childhood, including return on investment.

Ready Nation: This is a national-level association of business leaders and others specifically concerned with early childhood and is a source for news and business perspectives on the issue.

America's Promise Alliance: This is a national alliance of companies with a particular focus on lowering high school dropout rates. Ready Nation is also a partner, in recognition of the link between effective early education and high school completion.

¹ Heckman, J. J., Moon, S. H., Pinto, R., Savelyev, P. A., & Yavitz, A. (2010). The Rate of Return to the High/Scope Perry Preschool Program. *Journal of Public Economics*, 94(1-2), 114–128.

² Karoly, Lynn A. Toward Standardization of Benefit-Cost Analyses of Early Childhood Interventions. *Journal of Benefit Cost Analysis*, Volume 3, Issue 1, Article 4, 2012.

Karoly, Lynn A., Kilburn, R.M., Cannon, J., Early Childhood Interventions: Proven Results, Future Promise. RAND Corporation, 2005.

³ This is a theoretical graph developed by Heckman and LaFontaine (2007), based on their analysis of returns on investment to a range of programs. See also: Cunha, F, Heckman JJ, Lochner, LJ, Masinov JV. Interpreting the Evidence on Life Cycle Skill Formation. In Hanushek, E.F., Welch, F. Editors. *Handbook of Economics of Education*. North Holland, Amsterdam 2006, pp. 697-812 Chapter 12. Cunha, F. and Heckman, JJ. The Technology of Skill Formation. NBER Paper, 2007. Heckman, JJ. Schools, Skills and Synapses. NIH paper 2008.

⁴ For more on improving consistency in cost benefit analysis, see:

Karoly, Lynn A. Towards Standardization of Benefit-Cost Analysis of Early Childhood Interventions. RAND. *Journal of Benefit Cost Analysis*, Volume 3, Issue 1, Article 4, 2012.



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