

Economic Gains from Early Education and Care¹

by Arthur MacEwan, Political Economy Research Institute, Univ. of Massachusetts

High quality early education and care sets children on a path to become productive adults, able to make effective contributions to society in the years ahead. At the same time, quality programs for young children support working parents now, providing the child care they need to enter the paid labor force and make strong contributions to our economy.

An extensive body of research has established the large economic gains that can be obtained from high quality early education and care. The best examples of this research are the careful studies that have been carried out by the Noble Prize winning economist James Heckman and his colleagues.² They have examined the outcomes of the Perry Preschool Project, a long-standing model program in Michigan that has served children from low-income families.

With data on Perry Project participants extending well into their adulthood, Heckman and his associates have measured the economic gains and compared those gains with the expenditures on the program. They have found that the rate of return to those expenditures has been in the range of 7 percent to 10 percent per year, taking into account the returns to participants and to society in general. By way of comparison, Heckman has pointed out that that this rate of return range is above the return on stock market equity in the period from World War II until just before the financial crash of 2008, which was about 6.9 percent per year.³

Where Do the Gains Come From?

The economic gains from high quality early education and care programs come in many forms. High quality programs can enhance children's cognitive and social development, which will shape their well-being throughout their lives. The higher salaries that the children then obtain later in life, the greater economic contribution to society that these salaries tend to reflect, and the higher resulting tax payments are important elements of the gains that have been observed. There are, however, many other indirect economic gains: lower incidences of grade retention and special education; elevated high school graduation rates and college-going rates; reduced reliance on social support programs; better health outcomes; and less engagement with the criminal justice system.

These economic gains from high quality early education and care are important and need to be recognized. Yet, like all education, the



education of young children is about much more than economic returns. Indeed, the same factors that account for the economic gains also enhance, for example, society-wide equality of opportunity and an improved quality of life for participants.

The gains to children who participate in high quality programs are well established by the Perry Project studies and by similar studies of other high quality programs.⁴ However, large scale studies of early education and care programs, such as the 2010 Head Start study⁵ and the studies reported in 2006 by the National Institute of Child Health and Human Development (NICHD)⁶, do not show the same clear gains. In part, less favorable outcomes of these larger studies result from their focus on short-run test score gains rather than on long-run and multiple economic gains. In addition, the programs examined in these larger studies include many that are not “high quality.” The NICHD report indicates that more than half, 53 percent, of 1½ to 3-year-olds in child care in the United States were in settings that were only “fair,” and an additional 8 percent were in “poor” settings.⁷

Beyond the Children

While the most substantial long term gains can be achieved by high quality care and education, significant economic gains can be obtained from child care programs when simply *adequate* and affordable programs are available. In Massachusetts, where 69 percent of children under 6 have all their parents in the paid labor force,⁸ most parents rely on adequate programs to make it possible for them to take remunerative employment and thus meet their families’ economic needs. Parents receiving transitional assistance (TANF) are often required to enter the paid labor force and receive subsidies to pay for their children’s care in programs that are not necessarily of “high quality.”

While the gains for parents (and their families) from the opportunity to enter the paid labor force are readily apparent, there are also gains for society. Most directly, the parents are able to make a greater contribution to society’s total output and income, and they pay more in taxes. In addition, numerous studies indicate that parents’ productivity tends to be higher when their children are well cared for. Well cared for means, among other things, reliably cared for. With reliable childcare programs, parents are less frequently absent from their employment. Further, with the knowledge that their children are well cared for, parents will be under less stress, and consequently will be more productive. They will be more satisfied with their employment because they will not – or will less frequently and less intensely – harbor the feeling that their jobs are in conflict with the well-being of their children.⁹

Yet the cost of adequate – to say nothing of high quality – child care is prohibitive for many families. In Massachusetts, in 2011 the average annual cost for one 4 year old in a child care center was \$11,669 (and the cost of high quality care was of course higher than this average). For a two-parent family with income at twice the poverty level, this average cost would have accounted for 31.5 percent of its income. Even for a family with the median household income, 17.7 percent of its income would on average have been taken up for the care of one child.¹⁰

Substantial Gains

It is quite well established that by providing financial support for early education and care society can reap substantial gains – a high rate of return. While adequate child care is valuable, high quality care yields greater returns. Perhaps the most important conclusion that can be drawn from studies of early childhood education programs – studies of model programs and the large scale studies – is that high

quality is important and valuable. While high quality programs are more expensive per child, the evidence suggests that the pay-off per dollar is substantially higher.

What is High Quality Early Education and Care?

The quality of early education and care programs is assessed in two ways, by structure and process. High quality structure involves small group size, a high adult-child ratio, and more extensive schooling and training for teachers. High quality process involves multiple measures such as “positive care giving,” which means, for example, staff showing a positive attitude, having positive physical contact, responding to vocalizations, asking questions, reading, and actively encouraging positive behavior. There is a strong correlation between positive structural features and positive process features.

High quality programs tend to be relatively high cost programs. Small group size and a high adult-child ratio mean higher cost per child for any amount of personnel costs. And a staff with higher levels of schooling/training means higher personnel costs. Yet, in the same way that it pays off for society to invest in paved roads rather than “adequate” gravel roads, high quality early education and care is a good investment.

¹ This paper draws on the more extensive and more thorough report: Arthur MacEwan, *Early Childhood Education as an Essential Component of Economic Development: With Reference to the New England States*, Political Economy Research Institute, University of Massachusetts Amherst, January 2013, http://www.peri.umass.edu/fileadmin/pdf/published_study/ECE_MacEwan_PERI_Jan8.pdf.

² See, in particular, James J. Heckman et al, “The Rate of Return to the HighScope Perry Preschool Program,” *Journal of Public Economics*, No. 94, 2010, pp. 114-128.

³ The comparison is provided by James J. Heckman, “The Economics of Inequality: The Value of Early Childhood Education,” *American Educator*, Spring 2011, pp. 31-35, 47. Heckman actually cites a figure of 5.8% per year for the stock market returns. The source of that lower figure, however, was from a paper that was later revised with the figure changed to 6.9%. See, J. Bradford DeLong and Konstantin Magin, “The U.S. Equity Return Premium: Past, Present, and Future,” *Journal of Economic Perspectives*, Volume 23, Number 1, Winter 2009, Pages 194. The data for the 6.9% figure are from Robert Schiller, <http://www.econ.yale.edu/~shiller/data.htm>.

⁴ For a review of many of these studies, see Janet Currie, “Early Childhood Education Programs,” *Journal of Economic Perspectives*, Vol. 15, No. 2, Spring 2001, pp. 213-238.

⁵ U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation, *Head Start Impact Study Final Report*, January 2010.

⁶ *The NICHD Study of Early Child Care and Youth Development: Findings for Children up to Age 4½ Years*, (Washington, D.C.: National Institute of Child Health and Human Development, National Institutes of Health, U.S. Department of Health and Human Services, 2006).

⁷ *The NICHD Study as cited in the previous note*, p. 11.

⁸ The figure, for 2010, is from U.S. Census Bureau, *American Community Survey, American Fact Finder*, <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.

⁹ See the report cited in note 1 for an elaboration of these workforce participation and productivity points and for references to the numerous studies that support these points.

¹⁰ For sources of and details on these data, see Table 3 in the report cited in note 1.