Early Childhood Development is High-Return Economic Development

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In comments to business leaders in Omaha, Neb., regarding income inequality in the United States, Federal Reserve Chairman Ben Bernanke said, "Although education and the acquisition of skills is a lifelong process, starting early in life is crucial. Recent research—some sponsored by the Federal Reserve Bank of Minneapolis in collaboration with the University of Minnesota—has documented the high returns that early childhood programs can pay in terms of subsequent educational attainment and in lower rates of social problems, such as teenage pregnancy and welfare dependency."[1]

The research cited by the chairman is contained in several papers we have written over the past eight years on the economic benefits of investments in early childhood education (ECE). We have argued that investments in human capital prior to kindergarten provide a high public return. Such investments—especially for at-risk children—can have a substantial impact on the success of children's futures as students, workers, and citizens in democratic society. That is, the most efficient means to boost the productivity of the workforce 15 to 20 years down the road is to invest in today's youngest children. According to James Heckman, Nobel laureate economist at the University of Chicago, "Enriching the early years will promote the productivity of schools by giving teachers better-quality students. Improving the schools will in turn improve the quality of the workforce."[2]

The high returns to investments in ECE accrue not only by boosting labor productivity, but also by reducing costs to society, such as remedial education and crime. The cost of crime in the United States is estimated at about $1.3 trillion per year, or almost $5,000 per person. Research shows that investments in high-quality ECE appear to reduce future crime and are more cost effective than additional spending on police or incarceration.[3]

[1] Chairman Ben S. Bernanke, "The Level and Distribution of Economic Well-Being," Remarks before the Greater Omaha Chamber of Commerce, Omaha, Neb., February 6, 2007.
[2] See Heckman and Masterov.
[3] Ibid.

The promise of ECE programs is based on fundamental facts about early human development. A child's quality of life and the contributions that child makes to society as an adult can be traced to his or her first years of life. From birth until about the age of 5, a child undergoes tremendous development. If this period of life includes support for growth in language, motor skills, adaptive abilities, and social-emotional functioning, the child is more likely to succeed in school and to later contribute to society.[4] Conversely, without support during these early years, a child is more likely to drop out of school, depend on welfare benefits, and commit crime—thereby imposing significant costs on society.[5] ECE programs recognize this potential—and this risk—and seek to nurture healthy development from the earliest years.

Aside from comparing returns on investment with other types of crime prevention and education spending, we contend that investing in ECE yields a much higher return than most government-funded economic development initiatives.

For well over 20 years, government leaders at the state and local levels have invested in economic development schemes with public dollars that are at best a zero-sum game. In the name of economic development and creating new jobs, virtually every state in the union has tried to lure companies with public subsidies. Previous studies have shown that the case for these so-called bidding wars is shortsighted and fundamentally flawed.[6] From a national perspective, jobs are not created—they are only relocated. The public return is at most zero. And the economic gains that seem apparent at state and local levels are also suspect because they would likely have been realized without the subsidies. In other words, what often passes for economic development and sound public investment is neither.

We don't pretend to have all the answers to economic development, but we're quite certain that investing in ECE is more likely to create a vibrant economy than using public funds to lure a sports team by building a new stadium or attracting an automaker by providing tax breaks.

Several longitudinal evaluations all reach essentially the same conclusion: The return on ECE programs that focus on at-risk families far exceeds the return on other projects that are funded as economic development. Cost-benefit analyses of the Perry Preschool Program, the Abecedarian Project, the Chicago Child-Parent Centers, and the Elmira Prenatal/Early Infancy Project showed annual rates of return, adjusted for inflation, ranging between 7 percent and as high as 20 percent.[7] The Perry Preschool Program and Chicago Child-Parent Centers provided preschool at ages 3 and 4, Abecedarian provided full-day care and education for children a few months old through age 4, and the Elmira Prenatal/Early Infancy Project provided home visits by a nurse to high-risk mothers during pregnancy until the child turned age 2.

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[4] See Erickson and Kurz-Riemer.
[5] See National Scientific Council on the Developing Child.
[6] See Burstein and Rolnick.
[7] See Heckman, Grunewald, and Reynolds.

The benefits attributed to these ECE programs include reductions in special education and crime, and increases in tax revenue. Reductions in the cost of crime played a large role in boosting overall rates of return, particularly for the Perry Preschool Program. Only the Abecedarian Project did not include cost reductions due to decreases in crime because differences in crime rates between the treatment and control groups were not statistically significant.[8]

The study of the Perry Preschool Program showed a decrease in the percentage of adults at age 40 who were arrested five or more times from 55 percent for the control group to 36 percent for the treatment group, a drop of 35 percent.[9] In the Chicago Child-Parent Center study, the percentage of juveniles arrested decreased from 25 percent for the comparison group to 17 percent for the treatment group, a reduction of 33 percent.[10] The Elmira Prenatal/Early Infancy Project study showed the mean number of child arrests by age 15 dropped by 50 percent; meanwhile, the mean number of mother arrests decreased by 69 percent.[11]

In each study, the drop in crime led to reduced costs for incarceration, police protection, and courts. Furthermore, the costs to the victims of crime decreased, including loss of property and suffering. Added together across all four longitudinal studies, the savings to crime alone could justify increased investment in high-quality ECE.

In addition to the longitudinal studies, a meta-analysis by Washington State Institute for Public Policy creates an average composite of 53 ECE programs to compare the return on investment with other intervention programs for youth. The results for ECE for 3- and 4-year-old children, the Nurse Family Partnership, and home visiting programs for at-risk mothers and children compared favorably with other intervention program types reviewed by the authors, including several parole supervision programs for juvenile offenders.[12]

Market-oriented approach

These findings, promising though they are, pose a challenge: Small-scale ECE programs for at-risk children have been shown to work, but can their success be reproduced on a much larger scale? There are reasons to be skeptical; some recent attempts at scaling up ECE programs have been disappointing. However, it's our view that those programs failed in large part because they were based on old models that were ill-suited to get results. It's time to seriously reconsider how to effectively help at-risk children and their families. Based on a careful review of past and current programs, we believe that large-scale efforts can succeed if they are market-based and incorporate four key features:

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[8] The lack of a crime effect is likely due to relatively low crime rates in the study area compared with other parts of the country. See Burr and Grunewald.
[9] See Schweinhart, et al.
[10] See Reynolds, Temple, Robertson, and Mann.
[11] See Karoly, et al.
[12] See Washington State Public Policy Institute.

focus on at-risk children, start as early as prenatal, provide access to high-quality resources, and effectively engage the parents.

Achieving these characteristics at scale requires the flexibility, innovation, and incentives that are inherent in markets. For some, this is a radical idea, but for many families the ECE market works just fine. Many middle- and upper-class families have long benefited from the power of ECE markets by choosing programs and expecting a high-quality experience for children.

Our idea is to use the strength of the market by empowering at-risk parents with resources to access high-quality ECE. Qualified programs would compete for the scholarship children; parents would make the decision about where to enroll their children. In order to enroll children with scholarships, programs would have to achieve a set level of quality, such as a particular rating on a state quality rating scale. The scholarships would cover child tuition to qualified programs plus the cost of parent mentoring to ensure parental involvement. Scholarships would be outcome-based, meaning that they would include incentives for achieving measurable progress toward the life and learning skills needed to succeed in school.

Parent mentoring would include parent education; information about available financial, health, and human-services resources; and guidance on selecting an ECE program. Research shows that reaching children with multiple risk factors as early as possible is essential; even age 3 may be too late. So we suggest that while scholarships would pay tuition for a child to attend an ECE program beginning at age 3, the parent-mentoring program could start as early as prenatal.[13]

This market-based approach is in contrast to the more conventional approach of either increasing funding for existing programs or adding early childhood programs to the public school curriculum.

A Minnesota pilot

In January 2008, a pilot project based on this model was begun in St. Paul with about $6 million raised by the Minnesota Early Learning Foundation (MELF). The foundation was established with the help of business leaders in 2005; its mission is to sponsor demonstration projects that explore how Minnesota can cost-effectively invest in ECE with an emphasis on market-oriented solutions.[14]

The St. Paul Early Childhood Scholarship Program has served about 650 children and their families with parent mentoring and/or scholarships in two neighborhoods in St. Paul. In December 2010, the three-year point of the pilot, the program evaluator noted that the scholarships were reaching especially poor children: 71 percent of the families had household income below the poverty level, which is about $22,000 for a family of four. Prior to the availability of scholarships, only about one-third of children in the pilot

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[13] See Rolnick and Grunewald for additional details of the market-based proposal.

[14] More information about MELF, including a list of board members, is available at www.melf.us.

program attended a licensed early childhood program. After the availability of the scholarships, children were attending a variety of high-quality ECE programs, including nonprofit and for-profit child care and preschools, Head Start, family-based child care, and public school-based preschool programs. About three-quarters attended full-day programs; the rest attended half-day programs.[15]

The report also shows the number of high-quality programs in and near the pilot area increased more than 55 percent, from 22 programs to 34 over a two-year period, as existing programs improved their quality and a couple of new programs opened in the area. In order to enroll children with scholarships, programs needed to achieve at least a 3-star rating on a 4-star rating scale called Parent Aware, Minnesota's pilot quality rating and improvement system.

Not only did the number of high-quality programs increase, but parents considered the scholarship program to be user-friendly and had strong positive opinions about the parent mentors and scholarships.[16] Over 80 percent of parents interviewed over the phone indicated they talk with their child's teacher about behavior and accomplishments, classroom rules and expectations, and activities to practice at home. Parents also commented they noticed how the ECE program was preparing their children for kindergarten, such as learning English and developing stronger social skills.

Child outcome data also provided promising initial signals. Children participating in the pilot showed significant increases in language and early math skills across the first year of enrollment. The evaluators noted that children's developmental trajectories were improved from what they would have been without participating in the scholarship program and attending a high-quality ECE program. Children also showed significant improvements in social skills between baseline and one year later, but there weren't significant changes on average after one year for scores on behavior problems (i.e., anger-aggression) or attention and task persistence.

Lessons in progress

The federal government funds child care subsidies and Head Start, while 40 states fund prekindergarten programs.[17] As Congress considers how best to invest in ECE, lessons learned so far from the St. Paul pilot are applicable, particularly in reaching low-income children, engaging parents, and providing incentives to increase openings at high-quality programs.

As discovered in the St. Paul pilot, recruiting low-income families can be challenging, particularly since these families tend to be highly mobile. On the ground, person-to-person recruitment and word of mouth were more effective than passive outreach efforts. However, once parents enrolled in the program, they noted it was relatively easy to use and were enthusiastic about the scholarships, particularly when compared with child care

[15] See Gaylor, et al.
[16] Ibid.
[17] See Barnett, et al.

subsidized and administered by the government.[18] Combining parent mentors with the resources to choose a high-quality program for their child seems to have helped engage parents in the education of their children.

On the program side, more openings in high-quality programs have become available in part because the programs are paid at a higher rate than if they provided more typical child care. In addition, programs and families noted that the scholarship program required less paperwork, was easier to navigate, and made payments to ECE programs more timely than the child care subsidy system. In a scholarship system, the focus is on the child's education, not on the employment status of parents. Nevertheless, a number of parents noted that the scholarship program made it possible for them to obtain work and education opportunities.

Findings from the St. Paul pilot suggest that the federal government would benefit from providing incentives to states to implement scholarship programs. For example, a portion of the state-level grant competition, Race to the Top-Early Learning Challenge, could be used to fund scholarship pilots. As also demonstrated in the St. Paul pilot, scholarship pilots could operate with private sector contributions and involvement. Lessons learned from such pilots could guide policy to achieve the largest bang for the buck from ECE investments.

Compared with the billions of dollars spent each year on high-risk, low-return economic development schemes, this type of an investment in ECE programs is a far better and more secure economic development venture. We are confident that ECE investments driven by a market-based approach that focuses on at-risk children, starts as early as prenatal, provides access to high-quality resources, and empowers parents will lower crime, create a stronger workforce, and yield a high public return.

[18] Ibid.

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