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The Economics of Early Childhood Development: Lessons for Economic Policy

Conference explores the latest research on the economics of early childhood development

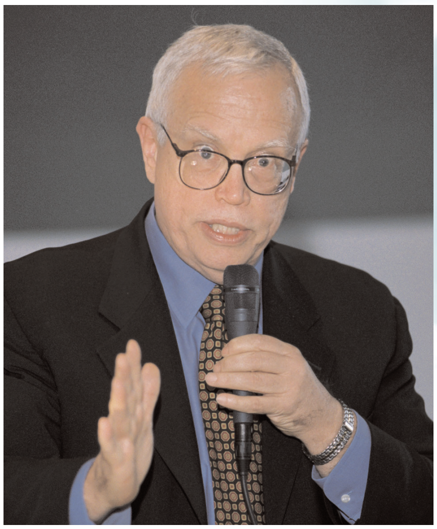
Kathy Cobb
Managing Editor

Genes. Mincer equations. Neurons. Opportunity costs. Biological embedding. Nature vs. nurture. These terms, voiced during discussions across disciplines at a mid-October conference at the Minneapolis Fed, eddied to the same central question: Are we investing enough in early childhood development?

"The Economics of Early Childhood Development: Lessons for Economic Policy" provided a rare opportunity for economists, public policy analysts, medical professionals and educators to share their research on early childhood development. The conference, hosted by the Minneapolis Fed and Minnesota's McKnight Foundation, in cooperation with the University of Minnesota, focused largely on the economics of early childhood development, but economists' findings were supported by sociological and biological evidence presented by other speakers. And while the intricate math of economic models may have escaped many, it was evident that the messages were understood by the audience of nearly 200 participants from across the country and Canada.

Some might question the topic's relevance to the Federal Reserve, but as the conference title suggests, early childhood development is an issue with strong economic implications. James Lyon, first vice president at the Minneapolis Fed, put it clearly in his opening remarks: "One of the charges of the district Fed banks is to provide analysis and insight into regional economic development. State and local governments have been debating how to best use public funds to encourage economic growth, and research has shown that early childhood development programs should be viewed as economic development."

Rip Rapson, president of the co-hosting McKnight Foundation, made the same point in even more pragmatic terms. "[T]he loss of one child's potential as a family member is only a shadow of the loss to that child's potential as an educated, productive world citizen," he said. "Our businesses have one less skilled worker. Our communities have one less person to contribute time, energy and money to sustain a high quality of life. Our state has one less citizen to engage meaningfully in public decision-making. There is one more adult at risk of … straying into crime or requiring continuing public subsidy."



"Skill begets skill; ability begets ability. … Early learning facilitates later learning."

James Heckman

Henry Schultz Distinguished Service Professor of Economics
Director of Social Program Evaluation, Harris School of Public Policy
University of Chicago
Recipient of 2000 Nobel prize in economics

Bringing together the best

Over the past year, Art Rolnick, Minneapolis Fed senior vice president and director of Research, has spoken and written extensively on early childhood development with Minneapolis Fed economic analyst Rob Grunewald. In collaboration with Nobel Laureate James Heckman, Rolnick conceived and planned the one-day conference "to bring together some of the best minds in the area of early childhood research to think through the issues and to ultimately learn how to design better policies." Heckman, well-known for his research on the impact of social programs on the economy and on society at large, has concluded that early investments in children produce greater economic returns than do investments later in life, such as on-the-job training.

Heckman's views were shared by the speakers throughout the day, beginning with Jack Shonkoff, dean of the Heller School at Brandeis University. Shonkoff, co-author of *From Neurons to Neighborhoods: The Science of Early Childhood Development,* a report of a National Academy of Sciences and Institute of Medicine committee, said there is an "unacceptably wide gap between what we know and what we do to promote healthy development in early childhood." Shonkoff called for a new public dialogue that moves beyond blaming parties involved—parents, communities, business or government. "The science makes it clear that each … has a role to play," he said. "Each of these provides something that the others can't do." Shonkoff, a pediatrician, reminded the audience several times that he was not speaking as an advocate but merely relating what "the science" revealed.

Shonkoff was followed by economists, beginning with W. Steven Barnett, professor of economics and education at Rutgers University, who bridged education and economics with an analysis of three studies on early childhood education. Looking at programs in Chicago, Chapel Hill, N.C., and Ypsilanti, Mich., Barnett found that overall these programs increased achievement on test scores, decreased grade retention and the need for special education, decreased crime and delinquency, and increased high school graduation rates. Barnett's cost-benefit analyses for all three programs indicated measurable economic benefits to society.

"Quality preschool education can be a good economic investment; [however,] economic benefits vary with the program, population and context characteristics."

W. Steven Barnett

Director, National Institute for Early Education Research
Professor of Economics and Education
Rutgers University

"For a long while, early childhood care has been portrayed and treated largely as a family issue. … We didn't fully understand how closely their private struggles relate to public social and economic issues."

Rip Rapson

President, McKnight Foundation

Janet Currie, professor of economics, University of California, Los Angeles, also presented findings from a study of preschool children in the federal Head Start program. She concluded that (a) Head Start has had positive effects, but it doesn't close the gap between rich and poor; (b) spending more money on the program may raise test scores, but doesn't solve children's behavior issues; and (c) additional dollars should go to reducing pupil-teacher ratios, rather than increasing teacher qualifications and salaries. This last point contradicted Barnett's conclusion that upgrading preschool teacher credentials improves outcomes for children.

Health outcomes and human capital

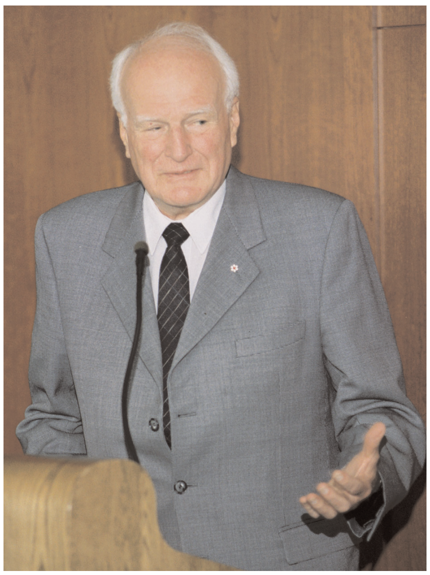
Luncheon speaker J. Fraser Mustard, founding president and fellow at the Canadian Institute for Advanced Research in Toronto, reviewed health outcomes of early childhood development programs, citing international historical research and more recent work in Canada. In a study of economic development and health in Holland from 1850 to 1920, he said, researchers found that as per capita income increased, death rates dropped dramatically. In another study, he noted, mortality rates were lowest among professional-level workers and highest among the unskilled. Mustard in the end reinforced that health issues have a place in further economic research on early childhood development.

Heckman took the stage to open the afternoon session. Presenting a paper on "formal models of childhood development that capture the essence of recent findings from the empirical literature," Heckman acknowledged recent research that "recognizes the importance of both cognitive and noncognitive abilities in explaining schooling and socioeconomic success." Heckman noted that the advantage in IQ scores enjoyed by children in early childhood development programs faded during elementary school. "[But] the greatest benefits of these programs," he writes, "are their effects on socialization and not those on IQ. Social skills and motivation have large payoffs in the labor market, so these programs have the potential for a large payoff." Heckman

"Health issues have a place in further economic research on early childhood development."

J. Fraser Mustard

Founding President and Fellow
Canadian Institute for Advanced Research
Toronto



"Head Start has positive effects, but it doesn't close the gap between rich and poor."

Janet Currie

Professor of Economics, University of California
Los Angeles

"The market isn't working in early child care."

Jack Shonkoff

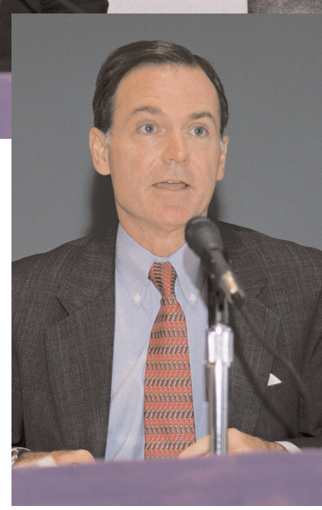
Dean, Heller School of Social Policy and Management
Brandeis University

also found that "ability is more important than liquidity" and that the child's environment can be a larger constraint on educational success than family income. Heckman's paper concludes, "Clearly much more work remains to be done to integrate the insights of the child development literature into the mainstream thinking about human capital formation and human capital policy analysis."

During a concluding panel discussion, David Jennings, interim superintendent of the Minneapolis Public Schools, cited data that suggest the achievement gap in Minneapolis public schools could be closed if the following steps were taken with at-risk children: attend a preschool program, move into all-day kindergarten and stay in the same school through the early grades. The last step would require a flexible transportation program to accommodate children who move during their early school years.

Panel moderator, Scott McConnell, professor of educational psychology at the University of Minnesota, cited a number of factors that suggest an optimistic prognosis: growing political will; unique players, like the Fed and business leaders; demonstration programs and university people committed to focusing on early childhood development.

The other member of the panel, Charles Kolb, president of the national Committee for Economic Development, a group of business and education leaders dedicated to economic and social policy research, indicated that business should be involved in programs like Success by 6, a United Way preschool effort pioneered in the Twin Cities.



Points of agreement

At the end of the day, Shonkoff, who began the program, summed up what he saw to be conference points of agreement:

1. The time has come to invest more resources in the development of young children.
2. We have to think in terms of all children, but we need to recognize that some are needier than others.
3. There's a clear understanding that whatever steps are taken, earlier is better than later.
4. The benefits of wise investments in young children will be substantial, and the consequences of poor investments will be costly.
5. Whatever the investment, it must be driven by knowledge. (But we also have to confront the fact that values trump knowledge in the political arena every time.)
6. The returns on investment in young children will depend on the extent to which we match programs and services to needs, and there must be ongoing movement in the knowledge base. R

Panel members discussed public policy implications of early childhood programs: (left to right) panel moderator, Scott McConnell, professor of educational psychology at the University of Minnesota; Charles Kolb, president of the national Committee for Economic Development; and David Jennings, interim superintendent of the Minneapolis Public Schools.

To read more about the conference and related research, go to minneapolisfed.org/research/studies/earlychild/2003conf/.