
The New Economics of Preschool

*New findings, methods and strategies for increasing
economic investments in early care and education*

Prepared by Dana E. Friedman, Ed.D.
For the Early Childhood Funders'
Collaborative

October 2004

THE NEW ECONOMICS OF PRESCHOOL

*New findings, methods and strategies for
increasing economic investments in early care and education*

**Prepared by Dana E. Friedman, Ed.D.¹
for the Early Childhood Funders' Collaborative**

Those concerned with adequate funding for quality early care and education have a new arsenal of tools with which to make their claims. Economists from various academic, business and government organizations have applied new economic models to early care and education and generated dollar figures for what investments in early childhood services can yield for the economy in the short- and long-term.

These exciting new developments are the result of a confluence of several strands of research and practice that challenge traditional assumptions:

- There are now several long-term studies that have followed graduates of early learning programs through adulthood and documented significant savings in the area of remedial education, school drop outs, welfare and crime. The studies conclude that improvements to social and emotional well-being yield greater returns than a focus exclusively on cognitive gains.
- Neuroscientists armed with new technologies have created startling insights into how the brain works and what inputs are needed to optimize its development. These data, accompanied by colorful, computer-generated pictures of the brain, both stimulated and unstimulated, suggest economic savings from investments in early learning, particularly in the area of social and emotional development.
- Building on the longitudinal studies and brain research, economists have begun to quantify the economic importance of early care and education in both the short- and long-term. This pioneering work is due, in part, to a desire to create appropriate economic models for today's service economy, where most workers provide services, versus a manufacturing economy, where most people work to produce goods. Early childhood programs are services that have been absent from current economic theories, however, they are now being used in the design of pioneering economic modeling.

"There are some areas of clear agreement between market economists and child development researchers. The time has come to invest in young children and there are substantial gains to be made from these investments if they are made wisely."

Jack Shonkoff, Dean, The Heller School
for Social Policy
and Management, Brandeis University,
Co-Editor of *From Neurons to
Neighborhoods*, 2003

This body of work is gaining attention at all levels of government and within the business community. It builds on a foundation of work that has led to a general acceptance of the

¹ The paper was written with assistance from Louise Stoney of Stoney Associates.

importance of the early years. Now, as a result of this economic research there are financial estimates for the short-term economic contributions of early care and education services and their long-term returns on investment. There is a need for continued research as well as active dissemination, planning and implementation of a host of creative solutions to showcase and maximize the economic contributions of early care and education.

Broadening the Economic Debate

The trillium flower with three petals is used by Cornell University's Linking Economic Development and Child Care Project because it best represents the varied relationships between early childhood services and the economy. One petal represents **Parents** and the need to focus on the social infrastructure supporting workers and their employers. Another petal represents **Children** and the investments in human development and education, while the third petal is the **Regional Economy** that quantifies child care as an industry that produces jobs and stimulates the economy.²



Each petal on its own is insufficient for capturing all of the short- and long-term economic contributions made by early childhood services. For instance, the educational impact on children has been a primary focus for many researchers and the significance of this long-term benefit is clearly responsible for the growing interest in universal PreKindergarten. However, the short-term economic returns that accrue from increased and stable parental employment (the Parents petal) as well as the child care industry as a whole (the Regions petal) should not be underestimated. Policy makers who face budget cuts for early care and education or propose new spending on early childhood services appreciate the research establishing the short-term returns on the investment. Clearly, early childhood education generates short- and long-term benefits for children, parents and society and all economic aspects of the field should be explored to justify the level of investments needed.

The table on the following page outlines the various research strategies that are generating meaningful data on the economics of early care and education and whose work is reviewed in this paper.

² R. Ribeiro and M. Warner. (January, 2004). Measuring the Regional Economic Importance of Early Care and Education: The Cornell Methodology Guide, p. 1. (<http://economicdevelopment.cce.cornell.edu/>)

**OVERVIEW OF RESEARCH ON THE ECONOMIC IMPACT
OF EARLY CARE AND EDUCATION³**

TYPE OF ECONOMIC RESEARCH	Short-term Effects	Medium-term Effects	Long-term Effects
Cost/Benefit Analysis, e.g. ○ Perry Preschool ○ Abecedarian Intervention ○ Chicago Child-Parent Center	For child: ○ Enhanced academic achievement ○ Improved health/nutrition ○ Increased well-being/less abuse ○ Increased non-cognitive skills and social competence during school years	For society/economy: ○ Greater school system efficiency ● Reduction in special education ● Reduction of grade repetition ● Higher student learning productivity ○ Reduction in abuse/neglect ○ Lower reliance on public health care	For child: ○ Higher likelihood of graduation/college enrollment ○ Higher wages/ employment potential ○ Lower teen pregnancy ○ Less delinquency For society/economy: ○ Sound basic education ○ Increased income tax revenues ○ Lower welfare dependence ○ Reduction in delinquency/crime
Macroeconomic Studies on the Impact on Human Capital, e.g. Work of Dr. James J. Heckman, University of Chicago	Builds on findings from Cost/Benefit Analyses	Builds on findings from Cost/Benefits Analyses	For labor market/economy: ○ “Dynamic complementarity”- more able people acquire more skills; more skilled people become more able ○ Younger children have a longer period of time to recoup investments
Microeconomic Studies on the Impact on Human Capital, e.g. Work of Art Rolnick, Rob Grunewald, Federal Reserve Bank of Minneapolis	○ Builds on findings from Cost/Benefit Analyses ○ Education savings, especially compared to other civic investments, e.g. stadiums, industrial parks	Builds on findings from Cost/Benefits Analyses	For society/economy: ○ General public benefits from less disruptive students and fewer crimes ○ Parents transfer new skills to younger siblings ○ Benefits to future generations (more education, income, less crime) ○ Break the chain of poverty ○ Higher returns than other government spending for economic development, e.g. stadiums, industrial parks
Studies on Impact of Fiscal Policies on Children, e.g. Work of William Gale, Brookings Institution, Laurence J. Kotlikoff, Boston University; Jagadeesh Gokhale, Invest in Kids			For society/economy: ○ Direct effect of tax cuts on rewards for working, saving, investing, and on after-tax income ○ Indirect effect of tax cuts on economic growth, savings ○ Burden imposed on today’s children and future generations ○ Impact on taxpayers with and without children

³ Cost/Benefit information adapted from C. Belfield. (February 2004). Early Childhood Education: How Important are the Cost-Savings to the School System? NY: Center for Early Care and Education, p.4.

TYPE OF ECONOMIC RESEARCH	Short-term Effects	Medium-term Effects	Long-term Effects
<p>Economic Development Studies, e.g. Work of Dr. Mildred Warner, Cornell University and Louise Stoney, Stoney Associates; National Economic Development and Law Center</p>	<p>For society/economy:</p> <ul style="list-style-type: none"> ○ # of ECE establishments (e.g. small businesses) and # of jobs created by these businesses ○ Economic activity stimulated when ECE businesses purchase local good and services ○ Economic activity from ECE staff when they spend wages on local goods and services ○ Leveraging of state and federal investments -- new dollars drawn into the regional economy ○ Economic activity stimulated by parents who are able to work and/or earn higher wages due to child care. 		

Cost/Benefit Analyses

The longitudinal studies conducted on the Perry Preschool Project, Abecedarian Intervention and Chicago Child-Parent Center have yielded sound empirical evidence that high quality early childhood programs yield significantly positive benefits for children in terms of IQ, school achievement, grade retention, need for special education, and social adjustment. The Perry Preschool Project involved 123 children followed until the age of 27 years, who attended roughly two years of preschool for 2.5 hours/day, and received home visits from the teacher once a week. Participants were compared to a control group that did not receive these services. The analysis indicates that for every dollar invested in these services, over \$7 in benefits was returned for the participants and society.⁴ The greatest savings are estimated to come from the reduction of crime and increases in earnings for participants.

Similarly, the Abecedarian Project in North Carolina provided 111 low-income children with a full-time high-quality preschool experience from infancy through age five. Participants and a control group have been followed over time, with the most recent assessment conducted when participants were 21. The research focused on a different set of social benefits than was measured in the Perry Preschool Project. The largest benefits from the Abecedarian Project were derived from increased earnings of the mothers and

⁴ W.S. Barnett. (1996). Lives in the Balance: Age-27 Benefit-Cost Analysis of the High/Scope Perry Preschool Program. *Monographs of the High/Scope Educational Research Foundation*: Number 11. Ypsilanti, MI.

subsequent earnings of the participants, as well as a reduction in smoking and health-related expenditures. The more favorable findings for children who participated in the program compared to children who did not, reveal a benefit of \$3.78 for each dollar invested.⁵

These cost/benefit analyses underscore an important realization about the lasting effects of early care and education which is, “the real benefits are not from making children smarter, but from nurturing children’s non-cognitive skills, giving them social, emotional and behavioral benefits that lead to success later in life.”⁶ This insight supports the claims that early care and education provides substantial long-term economic gains for future labor markets and future generations.

Some economists have examined specific economic benefits to determine where the greatest cost/benefits occur. Analyses by Clive R. Belfield of Teachers College, Columbia University, find enormous cost savings to the school system from the provision of early childhood education. The medium-term cost-savings to the state from investment in early care and education ranges from \$2,591 to \$9,547 per child participating in the program. The medium-term cost savings to the state from universal preschool programs range from \$555 million to \$828 million over the period K-12. These figures represented between 1.9% and 2.8% of total expenditures on education.⁷ The authors calculate the cost offset to the school system from investments in early care and education to be between 41% and 62% of the initial costs of the program.

Macroeconomic Studies of the Impact on Human Capital

James Heckman, a Nobel Laureate in Economic Sciences from the University of Chicago has made dramatic claims about the impact of early care and education because of the social skills that children learn in the early years which set a pattern for acquiring positive life skills later in life. He posits that our “preoccupation with cognition and academic “smarts” as measured by test scores to the exclusion of social adaptability and motivation causes a serious bias in the evaluation of many human capital interventions.”⁸ In addition, by focusing only on formal education as a mean to acquiring life skills, we ignore the important non-institutional sources of skill formation, such as families, employers, and communities.

Heckman also believes that analysis of human capital policies erroneously assumes that abilities are fixed at very early ages. In fact, child development research has demonstrated that basic abilities can be altered in the early years of life. Heckman’s fundamental premise is that “skills beget skills,” i.e. more able people acquire more skills, and more skilled people become more able. This “dynamic complementarity” of skill and ability formation is not reflected in current economic models of analysis.

⁵ L. N. Masse and W. S. Barnett. (2002). A Benefit-Cost Analysis of the Abecedarian Early Childhood Intervention. New Brunswick, NJ: National Institute for Early Education Research.

⁶ Committee for Economic Development. (September 2004). A New Framework for Assessing the Benefits of Early Education. *A Working Paper*. NY: p. 7.

⁷ C. R. Belfield. (2004). Early Childhood Education: How Important Are the Cost-Savings to the School System? NY: Columbia University, p. i.

⁸ J.L.Heckman. (2000). Invest in the Very Young. Chicago, IL: Ounce of Prevention Fund, p. 2.

Dr. Heckman began his research by investigating the economic return of job retraining programs for steelworkers. He realized that these programs were ineffective because steelworkers had difficulty learning new skills late in life and they had fewer years in which to recoup the costs of training.⁹ Heckman makes a strong case for a higher return on human capital when dollars are spent on the young rather than the old. For the same reasons, he further asserts that in order to encourage college attendance, investments in early childhood would be more effective than grant or loan programs to economically or cognitively disadvantaged teens. Heckman concludes, “The returns to human capital investments are greatest for the young for two reasons: (a) skill begets skills, and b) younger persons have a longer horizon over which to recoup the fruits of their investments.”¹⁰

Microeconomic Studies on the Impact on Human Capital

The effects of early care and education on human capital are based on: a) the future productivity of participants; and b) the improved socialization of participants who are more likely to pursue healthy, socially positive behaviors. A working paper by the Committee for Economic Development states that, “Although raising human capital is an easily agreed-upon goal, finding cost-effective programs that lead to long-term increases in human capital is difficult. The possibility of early education as a potent economic development tool presents a fresh opportunity.”¹¹

This opportunity has been pursued with gusto by Art Rolnick and Rob Grunewald from the Federal Reserve Bank of Minneapolis, who challenged the way in which Minnesota subsidized private businesses, and suggested that a far more effective way to generate a return on investment would be to focus on early care and education. “If properly funded and managed, investments in early childhood development yield an extraordinary return, far exceeding the return on most investments, private or public.”¹²

Like Heckman, Rolnick and Grunewald rely on the longitudinal cost/benefit analyses discussed above and claim economic gains not only for those being educated, but for the overall economy. While the child who has experienced early care and education is more likely to succeed in school and later contribute to society, a child without early care and education is more likely to drop out of school, receive welfare benefits and commit crime. Their calculations suggest that the direct benefits to children who attended the early childhood program, such as increased after-tax earning and fringe benefits, were smaller than those gained by the general public. “Based on present value estimates, about 80% of the benefits went to the general public, yielding over a 12% internal rate of return for society in general.”¹³ The calculations follow that two years of a high quality early education experience such as the Perry Preschool program would cost \$9,000 per year, or

⁹ Heckman, p. 2.

¹⁰ Heckman, p. 5.

¹¹ Committee for Economic Development. (September 2004). *A New Framework for Assessing the Benefits of Early Education. A Working Paper*. NY: p. 3.

¹² A. Rolnick and R. Grunewald. (December 2003). *Early Childhood Development: Economic Development with a High Public Return. Fedgazette*. p. 7. (<http://www.minneapolisfed.org/pubs/fedgaz/03-03/earlychild.cfm>)

¹³ Rolnick and Grunewald, p. 9.

\$18,000. At a 12% return, the value created in 30 years from this investment is \$124,776 in today's dollars.¹⁴

Rolnick and Grunewald suggest that cost/benefit analyses may understate the true, long-term impact of early care and education because they do not measure the positive effects on children born to participant families after the study period. Younger siblings of participants are likely to benefit from having better informed parents. In addition, these studies do not take into account the effect on future generations. "With increased education and earning, participants' children would be less likely to commit crime and more likely to achieve higher levels of education and income than if their parents hadn't attended the Perry Preschool program."¹⁵ A profound, long-term effect of early care and education, with significant economic gains, would be the ability of quality early childhood programs to break the chain of poverty, which the authors claim may very well be the case.

The authors conclude, "The conventional view of economic development typically includes company headquarters, office towers, entertainment centers, and professional sports stadiums and arenas. We have argued that in the future any proposed economic development list should have early childhood development at the top. The return on investment from early childhood development is extraordinary, resulting in better working public schools, more educated workers and less crime."¹⁶

A working paper from the Committee for Economic Development applies the same reasoning as Heckman, Rolnick and Grunewald to demonstrate how early care and education is a far better investment than the industrial parks, professional sports teams, and inducements to high-profile companies on which government spends billions. They even posit that these traditional "inducement and marketing" policies often have negative returns on investment. When compared to the returns projected by the Perry Preschool Project and Abecedarian Early Intervention Project, there is little question that early care and education is a much more successful economic investment.¹⁷

Studies on the Impact of Fiscal Policies on Children

Concern about how the next generation will pay for today's tax and health care policies is the focus of work by William G. Gale of the Brookings Institution and Laurence J. Kotlikoff of Boston University and the National Bureau of Economic Research. In concert with the working group, Invest in Kids, the National Economists Club and the Early Childhood Funders' Collaborative, among others, the authors show how recent tax cuts and Medicare spending increases enacted since 2001 will "redistribute resources across generations by raising the fiscal burdens placed on future generations and reduce the burdens placed on current generations...and could plausibly run into the tens of

¹⁴ R. H. Dugger. (August, 2004). U.S. Workforce Quality, Fiscal Sustainability, A Ten Year Plan. New York: Committee for Economic Development, Invest in Kids Working Group. p.12.

¹⁵ Rolnick and Grunewald, p.10.

¹⁶ Rolnick and Grunewald, p. 11.

¹⁷ Committee for Economic Development. (September, 2004). Developmental Education: The Value of High Quality Preschool Investments as Economic Tools. NY.

thousands of dollars per child.”¹⁸ The fact that many children’s initiatives are discretionary programs, e.g. Head Start, WIC, Title I Education funding, leaves them vulnerable at both the federal and state levels as legislators look for funds to pay for the tax cuts and subsequent debt. The authors conclude that projected budget deficits facing the nation as a result of recent fiscal policies provide a sound justification for investing in children. Because of the fiscal burdens imposed on future generations, it is imperative that the nation equip future generations with the human capital and other resources needed to be productive. The human capital and labor market studies reviewed in this paper further demonstrate the wisdom of investing in early care and education as a means of achieving long-term economic growth – even in a time of fiscal constraint.

Economic Development

The credit for the proliferation of local and regional studies linking economic development and child care belongs to Mildred Warner, an economist at Cornell University. In collaboration with Louise Stoney, an independent consultant in early care and education policy, studies have been done on the importance of early care and education services to regional economies in the states of Kansas, New York and Massachusetts, as well as in the New York State counties of Nassau/Suffolk (Long Island), Chemung and Tompkins. Additionally, the Linking Economic Development and Child Care Project, led by Warner, has created a website that includes a database of economic information and links to economic research information around the country.¹⁹

Warner posits that in order for economic development approaches to be applied to child care, “the industry must begin to present itself as a participant in the economic sector.”²⁰ Traditionally, state and local governments have assumed a “competitive stance” to attract higher-income taxpayers and industry to the region. In other words, they saw growth as attracting new businesses to the area; businesses that would create jobs and generate economic activity. The factors considered in economic projections did not include any aspects of the social infrastructure. However, “new theories of economic development emphasize investments in the social infrastructure and the quality of life as foundations for a new creative

What is the Child Care Industry in New York State?

Regional economic analyses typically include data on all full and part-day child care and early education programs, including: child care centers, Head Start, PreKindergarten, nursery schools, after-school programs and family child care homes. (Most studies have excluded unregulated home-based care because it is difficult to count.) In New York State, these programs represent:

- **22,000 small businesses**
- **119,000 employees**
- **a \$4.7 billion dollar industry**
- **750,000 working parents, who collectively earn over \$30 billion annually**

Investing in New York; An Economic Analysis of the Early Care and Education Sector, NYS Child Care Coordinating Council, 2004

¹⁸ W. G. Gale and L.J. Kotlikoff. (2004). Effects of Recent Fiscal Policies on Today’s Children and Future Generations. *Working Paper*. p. 3, p. 12.

¹⁹ The Cornell website provides links to all state and local studies on the economic impact of the early care and education industry, along with research reviews and lessons learned. The website also includes an interactive methodology guide, a quantitative database of current, national sources of comparative data on the early care and education sector, and a host of other resources that can help states conduct these economic analyses. <http://economicdevelopment.cce.cornell.edu>

²⁰ M. Warner, R. Ribeiro and A.E. Smith. (2002). Addressing the Affordability Gap: Framing Child Care as Economic Development. *Journal of Affordable Housing and Community Development Law*, 12(3), p. 295.

economy.”²¹ Thus, if early care and education begins to present itself as an industry that not only improves the quality of life but also creates jobs, generates economic activity and draws new (federal and state) dollars into the regional economy -- the result is a win/win for everyone. One can see the power of the numbers describing the magnitude of the early care and education industry in New York State in the box above.

Limitations of Current Short-Term Study Methodologies

To date, most studies of the short-term economic importance of child care have relied on input-output analysis (I/O). This is a standard tool used by economic development professionals to estimate the regional economic impact of an industry, including estimates of the "direct effects" as well as the ripple or "multiplier effects" of the industry. Direct effects include quantifying total gross receipts (revenues) of the industry as well as the number of small businesses, employees, children enrolled and families served. Multiplier effects result from spending by an industry. These multipliers, or "ripples" can be counted at two levels, including:

- **indirect effects** that measure how much economic activity is stimulated by early care and education *businesses* when they purchase goods and services from local suppliers; and
- **induced effects** that measure how much economic activity is generated by early care and education *employees* as they use their wages to purchase goods and services from local businesses.

Most studies of the short-term economic importance of the early care and education industry also attempt to estimate the economic value of enabling parents to go to work. This is typically done by estimating the number of parents who use paid child care, multiplying this by the average wage, and then stating that some portion of this sum can be attributed to child care. Unfortunately, there is no research to indicate what portion of earnings can, in fact, be attributed to child care services. Several studies have attempted to address this issue. Two Colorado studies, in Larimer and Boulder Counties, conducted a survey to estimate the wages that some parents would forgo if paid child care were no longer available. In a telephone survey to Larimer County households, 41% indicated that one parent would have to stop working if paid child care were no longer available, while 20% of households reported that one parent would have to reduce the number of hours worked each week if there were no child care.²²

“An economic analysis provides an opportunity to bring together feminist notions of care and count them in traditional economic development terms. Future research must look at other physical infrastructures and how they are measured and adapt these approaches to an investment in a social infrastructure like child care. These analyses can help identify practical community development tools that bridge the divide between physical capital and human development models. Policies typically reserved for economic development can be applied to child care.”

Warner, Ribeiro, and Smith, *Addressing the Affordability Gap: Framing Child Care as Economic Development*, p. 310

²¹ Warner, Riberio and Smith, p. 295.

²²Larimer County Early Childhood Council. (July, 2003). Economic Impact of the Early Care and Education Industry in Larimer County. CO, p. B-5.
(http://www.co.larimer.co.us/compass/early_care_impact.pdf.)

A Connecticut study takes a completely different approach to estimating the economic value of enabling parents to work. The research team explains their approach this way: "We remove the formal and informal child care sectors and their associated revenues and 'productivity' increases from the Connecticut economy and measure the economic losses due to the industry's absence. These losses represent a conservative estimate of the current economic contribution of the entire child care industry to Connecticut."²³

Input/output analyses are typically used for export industries, and some economists question their application to early care and education because such services are local, and not exported. Others contend that the economic benefits are *more* relevant because all of the economic gains stay in the local economy. The Linking Economic Development and Child Care Research Project recognizes the limitations of relying on input/output analysis as the tool for estimating the economic importance of early care and education. To this end, the project's research team has spent the last year working on a new methodology, which is currently called *hypothetical extraction*. The research team will share this approach with leading economists, as well as other researchers and economic development experts, in a small retreat planned for the spring of 2005.

Effective Uses of Input/Output Analyses

Input/output analysis is most effective when used to estimate the impact of "shocks" to a system. Thus, I/O can be used to show how public subsidies from the federal and/or state help to stimulate an economy and similarly, how subsidy cuts can produce economic losses that are far greater than the cut. For example, a Kansas study analyzed a legislative proposal to reduce eligibility for child care assistance from 185% to 150% of the poverty level – thus creating a reduction of \$1.5 million dollars to the state budget. Using input/output analysis, the study team was able to show that the cuts actually resulted in an economic loss to the state of approximately \$6.5 million.²⁴

The Benefits of Economic Development Research

This body of research yields a range of benefits to the field of early care and education.

- ***Increased credibility and investment.*** Framing early care and education as an economic development issue can help encourage investments in early care and education. Recognized as an industry that generates jobs, purchases local goods and services, and supports working families at *all* income levels, early childhood services have greater leverage within the business community. Employers are also likely to take note when the connection is made between preschool services and employee absenteeism and turnover. By quantifying the actual dollar savings and returns on investments from early care and education, the arguments for investment become concrete. As Janet Walerstein, Executive Director of the Child Care Council of Suffolk, NY said, when releasing the results of an economic impact study on Long Island, "Heads really turned when policymakers saw these numbers."

²³ Connecticut Center for Economic Analysis. . (Winter 2004). Child Care as an Economic Development Tool. *The Connecticut Economy*. p. 18.

²⁴ L. Stoney. (February 2004). Framing Child Care as Economic Development: Lessons from Early Studies, Ithaca, NY:, p. 12.

Some of the increased credibility that results from this research is due to the new messengers reporting the findings, i.e. people with more influence and power than early childhood professionals. An important example is a new *Policy Statement* forthcoming from the Committee for Economic Development with support from The Pew Charitable Trusts. This Statement is based on the research reviewed in this paper and will be launched at a December 3, 2004 national conference for business leaders and funders on the importance of investments in PreKindergarten.

- **Better data collection.** The economic development frame also leads to more informed data gathering and a whole new look at data partnerships. The data needed to conduct an economic development analysis of the early care and education sector must be provided by a variety of public and private agencies, (such as regulatory agencies, funding/administering agencies, and resource and referral agencies, etc.) These entities have not collected the kind of industry-wide data that are needed, e.g. the number of establishments or workers, gross receipts or customers. Nor are these agencies typically concerned with local economic data, demographics, industry comparisons, dependent care taxes claimed and so forth. Not surprisingly, those involved in conducting economic impact studies have experienced a large learning curve with respect to data collection needs and resources. Several research teams have begun to discuss -- and forge -- new approaches to data collection.

Several short-term economic impact studies have led to the incorporation of child care language into local and statewide planning documents. The Vermont Economic Progress Council included a recommendation that child care issues be integrated into regional economic plans funded by the state and that a task force be convened to develop strategies in response to the childcare economic impact study.

- **New partnerships.** There are also new partnerships forged among the various providers of early care and education, e.g. Head Start, PreK, centers, family child care homes, and the agencies that regulate them. Early childhood experts have an opportunity to work with those outside the field as well, e.g. academics, employers, economic development experts. Partnerships may occur through the creation of an advisory board, a research team, dissemination strategy, or implementation group. The California Local Investment in Child Care (LINCC) partners created a “theory of change” that provides a blueprint for implementation following local economic studies. (*See box.*)

California LINCC Theory of Change

- **Influence Land Use Policy to Encourage Child Care Facilities Development** (Revise zoning and planning documents, policies, process.)
- **Integrate Child Care Interests Into Economic Development** (Influence employer policies, participate in economic planning and decision making, influence redevelopment planning and use of block grants.
- **Support Child Care Facilities Development and Improvement** (Increase financing, predevelopment and technical assistance.
- **Enhance Business Skills of Child Care Providers** (Offer business development workshops, support accessing funds to expand or renovate.)

This new economic development frame has justified early care and education as an industry worthy of investment and important to economic growth. It has fostered new relationships with business and government policy makers and economic development experts that have the potential for creating new approaches to data collection, planning, professional development, management, finance, government policy, and advocacy.

Practical Applications and Next Steps

Not only is there benefit to increasing the amount of economic analyses described here, but the early childhood field needs help in learning how to use this new body of information and in designing new strategies that ultimately increase investments in the field.

Adopting an economic development frame has already lead to several innovative funding solutions that are a welcome departure from the traditional “tax and spend” strategies. The examples described below are all intriguing ideas worthy of more debate and analysis.

- ***Minnesota Foundation for Early Childhood Development***, proposed by Rolnick and Grunewald, seeks a one-time, \$1.5 billion outlay that would generate \$105 million annually to cover the costs of high-quality early childhood programs for all 3 and 4 year olds living in poverty in Minnesota.
- ***Venture Grant Fund***, created by Cornell’s Linking Economic Development and Child Care Project in conjunction with Smart Start’s National Technical Assistance Center (NTAC) and supported by the W.K. Kellogg Foundation, offers \$5,000 grants to communities pursuing “innovative strategies that link economic development and child care.” These small grants will help communities develop business plans, convene economic developers, draft legislation and the design of other “out of the box” solutions. Winners will be announced November 1, 2004 and due to the level of interest, not all worthy proposals can be funded.
- ***Child Care Investment Tax Credits***, an Oregon pilot program that creates \$2.5 million in tax credits to encourage private sector investments in child care. The funding pool of private investment is used to increase revenue for centers and providers, reduce parent fees and strengthen the capacity to improve quality.²⁵
- ***Collective Management of Early Childhood Programs***, a review of work by Louise Stoney, explores new ways of organizing and coordinating programs that could benefit participants with administrative cost savings, better cash flow and fiscal stability, stronger fundraising and increased capacity to carry debt, better working conditions for staff, access to support services, and better equality services for children and families. Implementation efforts are underway in Pennsylvania, Maine, Ohio and California.²⁶

²⁵ R. Shine and P. Magnuson. (2003). The Oregon Child Care Investment Tax Credit: A New Financing Approach for Child Care. Enterprise Foundation. (<http://www.enterprisefoundation.org/resources/ERD/resource>)

²⁶ Collective Management of Early Childhood Program. (2003). Smart Start National Technical Assistance Center and Cornell University Linking Economic Development and Child Care Research Project. (<http://www.earlychildhoodfinance.org/handouts/CollectiveManagementfullreport.pdf>)

Continued advancements like these are possible with support from the public and private sectors. Government needs to consider early childhood in comparison to other economic development projects and generate the real investments needed to sustain a high-quality system of early care and education. Business leaders need to recognize early care and education as a recruitment and retention strategy and as a contributor to economic growth. Finally, private funders can help inform this debate by funding more economic research, planning, and strategy design and implementation, as represented by the examples below:

- Encourage communities to use similar research methodologies so that national comparisons can be made.
- Help organizations to mine existing data.
- Create data management capacity at local agencies.
- Cover consulting costs for economists to collect data and write reports.
- Cover printing and dissemination costs.
- Encourage a multi-faceted approach to measuring the economic importance of ECE that includes both short and long-term impacts (e.g. the trillium.).
- Support forums for those communities that have conducted economic analyses to come together to share information about the impact of the research.
- Fund R&D for new innovative policy options.

In Summary

The field of early care and education is well poised to take advantage of the leverage that this body of data provides. Professionals know how to provide quality early care and education. They've never had the resources to pay for it. This body of economic research provides a credible and compelling case for why more investments in early childhood development is a wise strategy. This argument was perfectly stated in the September 2004 Network Update from the National League of Cities which included a review of research on the economic impact of early care and education -- applicable for all levels of government and employers, not just cities.

With money tight in cities and with budgets shrinking every year, each dollar invested needs to have a significant impact. The research is clearly showing that investing in quality early care programs is the absolute best way to use funds. The benefit is seen both immediately and in the long-term, and the pay-off is seen by everyone. Crime rates are lowered, graduation rates are raised, businesses benefit from educated and committed workers, and the city sees a huge return in tax revenue from the increase in the workforce. The phrase, "invest in kids" is thrown around a lot, but when taken literally, it can be the smartest investment a city has ever made.

GLOSSARY

Early care and education: A broad term that includes a range of early childhood services that includes PreKindergarten programs, Head Start agencies, family child care homes, group child care homes, and in some analyses, nursery schools. The broader field also includes family, friend and neighbor care that is largely unregulated by government.

Cost-benefit analysis: A 'scientific' technique, or a way of organizing thought, which is used to compare alternative social states or courses of action. Cost-benefit analysis shows how choices should be made so as to pursue some given objective as efficiently as possible. By making explicit what the social objectives are, it makes the decision-maker more accountable to the community.

Economics: The study of how societies allocate and manage their scarce resources.

Economy (the): Economic activity where people produce, consume, exchange, lend, or borrow. The economy can be differentiated as a regional economy, national economy, or world economy.

Economic analysis: The process of investigating economic phenomena in a systematic manner. In one sense, this is the heart and soul of the economic discipline. While economists spend ample time identifying economic concepts, the end result of this discovery process is usually aimed at combining these concepts in such a way as to evaluate or analyze alternative consequences.

Economic development: The process of improving the economy's ability to satisfy consumers wants and needs. Unlike economic growth, which is concerned with year to year increases in production, economic development deals more with the basic fabric of society, especially the institutions that govern the way our economy and society functions. As such, a lesser developed nation is not only likely to have a low levels of production and limited amount capital, but also cultural beliefs and government practices that prevent more effective use of the capital.

Economic growth: The long-run expansion of the economy's ability to produce output. This is one of five economic goals, specifically one of the three macro goals (stability and full employment are the other two). Economic growth is made possible by increasing the quantity or quality of the economy's resources (labor, capital, land, and entrepreneurship).

Externalities: Costs or benefits that impact society but are not included in the market price of a good or service. Pollution is an example of a negative externality. Education is an example of an externality benefit when members of society other than students benefit from a more educated population.

Human capital: The stock of knowledge and acquired skills embodied in individuals.

Income effect: The effect of a change in income on the quantity of a good or service consumed.

Internal rate of return: Interest rate received for an investment consisting of payments and revenue that occur at regular periods. Easier than cost-benefit analyses for comparing public and private returns on investment.

Investment: The sacrifice of current benefits or rewards to pursue an activity with expectations of greater future benefits or rewards. Investment is typically used to mean the purchase of capital by business in anticipation of the profit. By increasing the quantity or quality of resources, investment is a source of economic growth. While investment, in principle is diverse, in practice, the official

government measure, as reported by the Department of Commerce, includes businesses' purchases of capital and consumers' purchases of new houses.

Macroeconomics: The branch of economics that studies the entire economy, especially such topics as aggregate production, unemployment, inflation, and business cycles. It can be thought of as the study of the economic forest, as compared to microeconomics, which is study of the economic trees.

Microeconomics: The branch of economics that studies the parts of the economy, especially such topics as households, markets, prices, industries, demand, and supply. It can be thought of as the study of the economic trees, as compared to macroeconomics, which is study of the entire economic forest.

Market demand: The relationship between the total quantity of a good demanded and its price.

Market economy: A decentralized system where many buyers and sellers interact.

Market failure: Market failure occurs when the workings of the price mechanism are imperfect and result in an inefficient or grossly unfair allocation of resources from the perspective of society. Examples include the education and defense markets.

Multiplier effect: The number of times new investment spending will be re-spent to produce a certain amount of new income.

New Economy: Sectors of the economy that are knowledge/human-capital-based with the understanding the technology ultimately derives from human ingenuity. While human capital is a prime driver in the information technology and telecommunications sectors, it also has been responsible for significant improvements in productivity in more traditional industries such as automobiles, aircraft and agriculture.

BIBLIOGRAPHY

- Barnett, C. R. (1996). *Lives in the Balance: Age-27 Benefit-Cost Analysis of the High/Scope Perry Preschool Program. Monographs of the High/Scope Educational Research Foundation: Number 11.* Ypsilanti, MI.
- C. Belfield. (February 2004). *Early Childhood Education: How Important are the Cost-Savings to the School System?* NY: Center for Early Care and Education.
- The Child Care Industry: An Integral Part of Long Island's Economy. (2004). New York: Child Care Councils of Nassau and Suffolk. (www.childcarenassau.org)
- The Child Care Industry: Supporting Jobs and Economic Development in Minneapolis. (June 2003). Minneapolis, MN: Greater Minneapolis Day Care Association. (www.gmdca.org)
- Collective Management of Early Childhood Program. (2003). Smart Start National Technical Assistance Center and Cornell University Linking Economic Development and Child Care Research Project. (<http://www.earlychildhoodfinance.org/handouts/CollectiveManagementfullreport.pdf>)
- Committee for Economic Development. (September 2004). *A New Framework for Assessing the Benefits of Early Education. A Working Paper.* New York.
- Committee for Economic Development. (September 2004). *Developmental Education: The Value of High Quality Preschool Investments as Economic Tools. A Working Paper.* New York.
- Connecticut Center for Economic Analysis. . (Winter 2004). *Child Care as an Economic Development Tool. The Connecticut Economy.*
- Cornell University Department of City and Regional Planning. (2004). *Investing in New York; An Economic Analysis of the Early Care and Education Sector.* Albany, NY: New York State Child Care Coordinating Council. (www.nysccccc.org)
- Dugger, R. H. (August, 2004). *U.S. Workforce Quality, Fiscal Sustainability, A Ten Year Plan. Working Paper 4.* New York: Committee for Economic Development, Invest in Kids Working Group.
- The Economic Impact of the Child Care Industry in North Carolina. (2003). Oakland, CA: National Economic Development and Law Center. (www.nedlc.org)
- The Economic Impact of the Child Care Industry in Texas. (December 2003). Texas: Texas Workforce Commission. (www.texasworkforce.org)

- Gale, W.G., Kotlikoff, L. (May, 2004). Effects of Recent Fiscal Policies on Today's Children and Future Generations. *Working Paper*.
- Heckman, J.L. (2000). Invest in the Very Young. Chicago, IL: Ounce of Prevention Fund.
- Investing in the Child Care Industry; An Economic Development Strategy for Kansas. (April 2003). Kansas: Mid-America Regional Council.
- Larimer County Early Childhood Council. (July, 2003). Economic Impact of the Early Care and Education Industry in Larimer County. CO. (http://www.co.larimer.co.us/compass/early_care_impact.pdf.)
- Masse, L. N. and Barnett, W. S. (2002). A Benefit-Cost Analysis of the Abecedarian Early Childhood Intervention. New Brunswick, NJ: National Institute for Early Education Research.
- Ribeiro, R., Warner, M. (January, 2004). Measuring the Regional Economic Importance of Early Care and Education: The Cornell Methodology Guide. Ithaca, NY: Linking Economic Development and Child Care Research Project. (<http://economicdevelopment.cce.cornell.edu/>)
- Rolnick, A., Grunewald, R. (December 2003). Early Childhood Development: Economic Development with a High Public Return. *Fedgazette*. (<http://www.minneapolisfed.org/pubs/fedgaz/03-03/earlychild.cfm>)
- Shine, R., Magnuson, P. (2003). The Oregon Child Care Investment Tax Credit: A New Financing Approach for Child Care. Enterprise Foundation. (<http://www.enterprisefoundation.org/resources/ERD/resource>)
- Snead, M. (January 2004). The Economic Impact of Oklahoma's Child Care Industry. Stillwater, OK: Oklahoma State University.
- Stoney, L. (February 2004). Framing Child Care as Economic Development: Lessons from Early Studies, Ithaca, NY: Linking Economic Development and Child Care Research Project. (<http://economicdevelopment.cce.cornell.edu>)
- Trails, S., Wohl, J. (2004). The Economic Impact of the Child Care and Early Education Industry in Massachusetts. Oakland, CA: National Economic Development and Law Center. (www.nedlc.org)
- Warner, M., R. Ribeiro and Smith, A.E. (2002). Addressing the Affordability Gap: Framing Child Care as Economic Development. *Journal of Affordable Housing and Community Development Law*, 12(3). (<http://economicdevelopment.cce.cornell.edu/>)

About the Early Childhood Funders' Collaborative

The Early Childhood Funders' Collaborative (ECFC) is an affiliation of individuals who serve as staff at foundations or corporate giving programs that have substantial grantmaking portfolios in early childhood care and education. ECFC was formed by grantmakers to provide opportunities for networking, information sharing and strategic grantmaking to staff members of foundations and corporate giving funders. For more information about ECFC, contact:

Deborah Stahl deborah.stahl@att.net or
Susan Hibbard susan.hibbard@verizon.net

For more information about the funding of economic research, contact:

Barbara Reisman The Schumann Fund for New Jersey breisman@att.net, or
Sara Watson The Pew Charitable Trusts swatson@pewtrusts.com

To reach the author:

Dana E. Friedman danaelise@aol.com