A business partnership for
early childhood and economic success

ReadyNation

Attracting, Developing, and Maintaining Human Capital: A New Model for Economic Development

"Business incentives and early childhood programs should be considered together because they complement each other in a balanced economic development strategy. Programs to directly create jobs via business incentives should be complemented by helping local residents obtain the skills needed for those jobs, via policies such as early childhood programs."

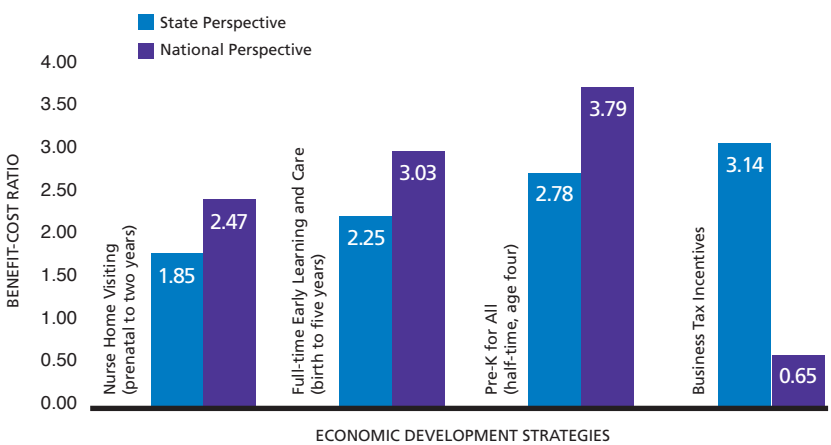
Timothy Bartik, Senior Economist, W.E. Upjohn Institute for Employment Research in *Investing in Kids*

Investing in Kids: Early Childhood Programs and Local Economic Development[1], a 2011 book by Timothy Bartik, Senior Economist at the W.E. Upjohn Institute for Employment Research, provides a new evidence-based approach for effective economic development. This approach is designed to support business growth and job creation by improving worker productivity and earnings both today and in the years and decades to come.

In his book, Bartik argues for a comprehensive model that employs a combination of programs—well-designed business incentives and high-quality early childhood services open to all children—to build short- and long-term human capital. By supplementing a research driven package of business incentives with investments in early childhood programs, economic development agencies can meet business' immediate need for skilled workers, strengthen the workforce pipeline, and generate strong returns to taxpayers.

Exhibit 1: Early Childhood Programs Have High Benefits Compared With Costs.

Ratio of Economic Development Benefits to Cost



SOURCE: Chapters 1 and 10, Bartik, *Investing in Kids.*

Early Education is Economic Development

Bartik's analysis confirms what decades of prior research has shown: Proven early childhood investments, including high-quality pre-k education for three- and four-year-old children, promote productivity growth and job creation in the near term and cultivate a better future workforce. In the short run, Bartik finds early education and care programs help secure skilled workers and raise their productivity and earnings by:

- **attracting** highly-skilled workers with young children, who are more likely to settle where quality services are most available;
- **giving** employees peace of mind so they can be more productive on the job and less absent; and
- **boosting** demand for well-qualified teachers, who, in turn, tend to spend their earnings locally.

Over the longer term, effective early childhood programs enable children to become more creative, adaptable, team-ready employees. Children, especially those at risk of school failure, who attend high-quality pre-k programs have:

- higher test scores through their K-12 years;
- improved social and emotional skills, including better interactions with peers and teachers;
- lower rates of grade repetition and special education placements;
- significantly greater high school graduation and college attendance rates; and ultimately
- increased employment rates and higher earnings in adulthood.

Bartik also notes that roughly 60 percent of all American workers—and 45 percent of those with a college degree—live and are employed in the state where they grew up. Using these data, he calculates that as children grow to be local workers, states that provide quality early experiences can expect to reap both long- and short-run economic benefits.

Exhibit 2: Percentage of 4-Year-Olds Living in Same State or Metro Area at Later Ages[2]

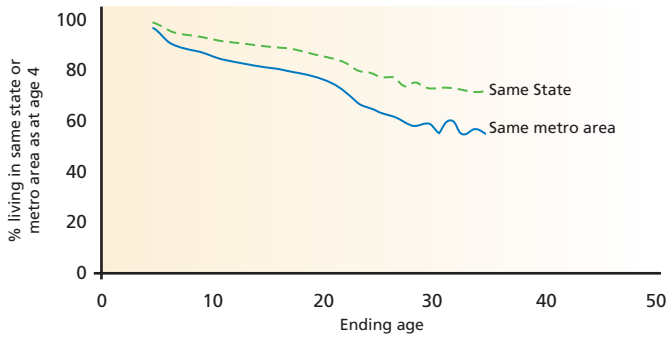


Exhibit 3: Preschool's Effects on Property Values

	Based on effects on elementary test scores	Based on assumed full capitalization of earnings effects, 4.7% discount rate
% effect on property values	0.8%	5.1%
Ratio of property value increase to annual program costs	13	81

Returns from Early Childhood Competitive with Business Incentives

From a state perspective, the increase in per capita earnings, per dollar invested in early childhood programs, ranges from $1.85 for a quality nurse home visiting/parent mentoring program to $2.78 for pre-k for all children. As shown in Exhibit 1, returns on these programs are even higher nationally. By contrast, well-designed business incentives, as outlined in Bartik's book, have higher state but lower national returns. Even well-designed business incentives reap part of their state returns by taking away jobs from other states, whereas early childhood programs increase national economic productivity by developing better workforce quality.

In the short run, **property values may rise by at least $13 per dollar of annual pre-k spending** due to pre-k's effects in increasing school test scores, which are valued by parents making homebuying decisions. Effects of elementary school test scores on property values have been empirically demonstrated by many rigorous studies comparing similar houses in similar neighborhoods, differing only in elementary attendance zone assignment. If parents fully understood pre-k's effects in increasing adult earnings, which are greater than predicted by test scores, they should be willing to bid property values up by 81 times the increase in annual pre-k spending, as this represents the present value of the increased earnings associated with greater annual pre-k spending.

Ratio of Economic Development Benefits to Costs of Universal Pre-K, by State[3,4]

State	Ratio	State	Ratio	State	Ratio
Alabama	2.77	Louisiana	2.88	Ohio	2.86
Alaska	2.31	Maine	2.71	Oklahoma	2.52
Arizona	2.83	Maryland	2.78	Oregon	2.71
Arkansas	2.47	Massachusetts	2.71	Pennsylvania	2.80
California	3.05	Michigan	2.95	Rhode Island	2.53
Colorado	2.58	Minnesota	2.87	South Carolina	2.83
Connecticut	2.67	Mississippi	2.52	South Dakota	2.18
Delaware	2.59	Missouri	2.71	Tennessee	2.84
Florida	2.95	Montana	2.30	Texas	3.15
Georgia	2.94	Nebraska	2.38	Utah	2.85
Hawaii	2.61	Nevada	2.61	Vermont	2.48
Idaho	2.37	New Hampshire	2.55	Virginia	2.75
Illinois	2.69	New Jersey	2.65	Washington	2.84
Indiana	2.80	New Mexico	2.51	West Virginia	2.26
Iowa	2.48	New York	2.62	Wisconsin	2.94
Kansas	2.38	North Carolina	2.98	Wyoming	1.96
Kentucky	2.70	North Dakota	2.03	U.S. average	2.78

Source: Tim Bartik, *Investing in Kids.* Benefits vary by state due to differences in mobility.

Ensuring that all children have access to quality pre-k, Bartik notes, provides the biggest economic development boost, but if that is not feasible, states can begin by targeting investments to at-risk children.

Quality Early Education is a Key Part of Maximizing Human Capital

Bartik argues that a comprehensive economic development strategy must include early learning programs, to:

- cultivate and retain high-paying businesses;
- boost the quality and productivity of the existing workforce;
- attract both sophisticated industries and the highly skilled workers they need; and
- continue to produce globally competitive workers into the future.

Conclusion

A community seeking to improve its economic situation knows that attracting, developing and maintaining a skilled, creative, productive workforce are among its top priorities. While human capital is key to recovery from an economic downturn, as the economy grows, human capital needs will be even greater. Having a supply of well-educated, highly skilled workers will position communities and states to compete nationally and globally. Well-designed incentives and proven early childhood programs provide a powerful one-two punch that builds human capital and produces a winning economy.

This brief summarizes Bartik's findings on early education. His book also contains a detailed analysis of the data on business incentives and related recommendations.

Quality Pre-K Generates Short and Long-Term Returns to Taxpayers

- Savings of up to $3,700 per child to school systems over the K-12 years;[5]
- Reductions in special education placements of nearly 50 percent through second grade[6] and grade repetition of as much as 33 percent through eighth grade;[7] and
- Crime-related cost savings of between $2.00 and $11.00 per dollar invested.[8]

ReadyNation is a business partnership for early childhood and economic success. Our mission is to amplify the voice of business leaders in support of early childhood policies and programs that strengthen our economy and workforce.

Add your voice.

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[1] Timothy J. Bartik. *Investing in Kids: Early Childhood Programs and Local Economic Development* (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2011).

[2] Data are from the Geocode version of Panel Survey of Income Dynamics, 1970 to 2005. Estimated percentages pool data over all year pairs. All estimated percentages use appropriate individual weights in the PSID. All metro area definitions for all year pairs are based on year 2008 metro area definitions. Percentage living in same state or metro includes returnees; that is, the person does not need to have stayed continuously in same state or metro area, rather, the question is whether at some later age they are living in state they were in at age 4.

[3] These state-specific ratios of economic development benefits to costs are generated by adjusting for differential out-migration. This is based on the percentage of those born in the state that still live there. Bartik extrapolates to different states based on how benefits are altered from the United States to the typical state by out-migration. The benefits to pre-K participants in the typical state are a ratio 2.65 to costs. (There are also balancedbudget multiplier benefits and benefits to parents. These benefits are assumed to be unaltered by state migration, as these benefits are more immediate. There are also benefits from social spillover effects of more education. These are also assumed unaltered, as these may be larger if there is more mobility.) The benefits to pre-K participants in the United States are 3.66. To extrapolate this to other states, I multiply 3.66 by the following ratio: (1 – ([(3.66 – 2.65) / 3.66] × [100 – % born in state that remain] / [100 – 68.4]). The figure 68.4 is the percentage of those born in a typical state that are still living there in the 2000 Census. This calculation generates a figure of 3.66 for the United States and 2.65 for the typical state. After this figure is calculated for some other state, using figures from Table 9.1, I add 0.13 to reflect benefits of more spending, benefits to parents, and social spillover benefits of education.

[4] Tim Bartik, *Investing in Kids.*

[5] Belfield, Clive R., and Heath Schwartz, "The Economic Consequences of Early Childhood Education on the School System." New Brunswick, NJ: National Institute for Early Education Research, 2006.

[6] Center for Child Development. "LA 4 Longitudinal Report." Baton Rouge: Louisiana Department of Education, 2007.

[7] Albert Wat, "The Case for Pre-K in Education Reform: A Summary of Program Evaluation Findings," (Washington: Pew Center on the States, 2010). http://www.pewcenteronthestates.org/uploadedFiles/The_Case_for_PreK.pdf

[8] Albert Wat, "Dollars and Sense: A Review of Economic Analyses of Pre-K," Washington, DC: Pre-K Now). http://www.pewcenteronthestates.org/uploadedFiles/wwwpewcenteronthestatesorg/Initiatives/Pre-K_Education/ PEW_PkN_DollarsandSense_ May2007.pdf