"Investing in Kids: Early Childhood Programs and Local Economic Development"
Presentation by Tim Bartik to YHC&ED Working group, May 9, 2011

In this talk, I will try to summarize a few key points from my book, "Investing in Kids: Early Childhood Programs and Local Economic Development". This book was published in January of 2011.

The book's main point is that if a U.S. state government invests in high-quality early childhood programs, this can provide a payoff in providing benefits for state economic development that is the same or better per dollar invested than more traditional state economic development programs, which focus on business tax incentives.

The payoff from investing in high-quality early childhood programs is higher per capita income for state residents. The mechanism for achieving that payoff is primarily that these programs lead to higher quality labor-supply of former child participants. Over three-fifths of these former child participants in these early childhood programs will remain in the same state as adults. Therefore, these programs, if run well, will increase the quality of a state's labor supply. This higher quality labor supply will encourage the creation of more and better jobs in the state economy.

The U.S. context for this discussion is that state governments play the dominant role in setting both U.S. educational policy and U.S. economic development policy. State governments, along with local governments, which are creatures of state government, provide most of the funding and direction to educational programs. And state governments are the major entity that directly tries to shape long-run economic development around the country.

Now, it may seem obvious to economists that economic development is affected by the quantity and quality of both labor supply and labor demand. But this is not obvious to most non-economists, and in particular to state policymakers, especially economic development policymakers. In the United States, most state policymakers pursue economic development by the use of state tax policy, and in particular by the use of discretionary tax incentives to attract potentially mobile businesses.

The use of business tax incentives is premised on the common-sense notion held by most state policymakers that the main goal of state economic development policy is simply to attract jobs, and that jobs are most directly affected by business taxes. But jobs are only a proximate goal of state economic development policy. Benefits for state residents must ultimately consist of some state resident's increase in real income. In the case of job growth, over two-thirds of its benefits have been shown to be the increase in per capita earnings of state residents due to higher employment rates or higher wage rates.

Once the goal of economic development policy is defined as the increase in earnings per capita of state residents, due to higher employment rates or wage rates, it is readily apparent to any labor economist that such a goal can be achieved by working on either side of the labor market, either the demand-side or the supply-side. Public policy can either increase the quantity or quality of the labor demand for state residents, or the quantity or quality of the labor supply of state residents. Demand-side economic development policies include business tax incentives. Supply-side economic development incentives include early childhood programs.

Which works better? In my book, I show that from a state perspective, both have a similar payoff. Per dollar invested, both well-designed business tax incentives and well-designed early childhood programs increase per capita earnings for state residents by about $2 to $3 per dollar invested.

Behind these benefit-cost calculations are many elasticities or impact estimates from the research literature. On the demand-side, these include how businesses respond to business tax incentives at the state level, and how state employment rates and wage rates respond over time to state labor demand shocks. On the supply-side, these include how early childhood programs affect adult outcomes, how many adults will stay in the same state, and how job growth responds to labor supply shocks.

One of the surprising elasticities is how large the adult outcome effects are of even quite time-limited early childhood programs, such as one year of half-day preschool during the school year. As James Heckman has argued, the most plausible mechanism for generating such long-run effects is that the early development of so-called "soft skills" or social skills tends to cause a self-perpetuating creation of additional soft skills and hard skills over time.

Another surprising elasticity is how large the percentage of state residents who stay in the same state for most of their working career. Despite the much-touted mobility of the American worker, over three-fifths of all Americans stay in their childhood state for most of their working career. This percentage does not vary hugely by state, or even with local economic conditions. Presumably this reflects worker ties to the familiar people and places of their childhood state.

A number of issues are discussed in this book that are relevant to the desirability of supply-side economic development policies such as early childhood programs, compared to more traditional business tax incentives.

One issue is quality of early childhood programs. What makes for quality? We have some knowledge, but it is imperfect. We know that smaller class sizes, but not necessarily smaller child to staff ratios, will make a difference. We know that attracting and retaining better preschool teachers make a difference, but we are uncertain about what precise credential requirements for teacher are desirable. We know that even slight improvements in the quality of teacher/child interactions can make enormous differences to the measured test score effects of early childhood programs, and that even slight variations in early test score effects are associated with large adult earnings differences. We know that there is a large variation in quality across programs. We know that while the federal Head Start program has many effective Centers, some of the most cost-effective early childhood programs are run at the state or local level.

All of these findings argue that large-scale program implementation should be accompanied by local flexibility and innovation, with rigorous evaluation of results. One of the most promising methodologies that has recently been used to allow ongoing evaluation of large-scale preschool is regression discontinuity studies of preschool programs, which has been implemented by Bill Gormley and his colleagues at Georgetown, and Steve Barnett and his colleague at Rutgers, and applied to many state programs. These regression discontinuity studies compare performance on the same tests at preschool entrance, and at kindergarten entrance of former preschool participants. These two groups are similar except for whether they made the age-cutoff for preschool, which can be controlled for, and so their test score differences can be regression adjusted to yield estimated test score effects of large scale preschool programs.

A second issue is whether early childhood programs offer sufficiently large short-term benefits to be attractive to state politicians. While the benefits of business tax incentives that attract business are immediate, many of the benefits from early childhood programs are long-term, in the increased adult earnings of former child participants.

Are there possible short-term benefits of early childhood programs? Yes, and I discuss several in my book. Let me just here mention two. First, there are potentially large short-term benefits due to reduced costs from special education assignments. For universal pre-k programs, which include middle income and upper income students as well as lower-income students, the special education cost savings offset 4% of program costs as the first cohort enters kindergarten, and then grows by about 4% per year over the next 13 years as the program graduates progress through the K-12 system. In the long-term, the likely cost coverage of reduced special education costs are about 48% of program costs. For targeted pre-k programs, which are targeted on the disadvantaged, the likely cost savings are much greater because of greater effects on special education usage. Under some scenarios, these costs savings start out at 17% of program costs after 1 year, and then grow to be more than double program costs after 13 years, in the new long-run equilibrium.

Second, there are possible property value increases at the local level due to higher quality early childhood programs. We know that parents and other homebuyers are willing to pay more for higher test scores in elementary school by paying more for houses that offer such a neighborhood amenity. If we simply calculate the plausible test score effects of high-quality preschool, the likely property value effects of high-quality preschool could be as great as 13 times annual program costs. If parents fully understood the earnings effects of preschool, they might be able to pay even more for access to such programs, with property value increases of as much as 80 times program costs. Of course, the exact property value increase depends on the assumptions, and we need more research on exactly how property values do respond to preschool quality.

A third issue with early childhood programs is the distributional effects of different programs, and how these distributional effects compare to the distributional effects of business tax incentives. Business tax incentives have modestly progressive effects on the income distribution. These effects are modest because the earnings effects on lower income groups tend to be lower because these groups tend to be less competitive for obtaining the new jobs, and when they do, work at lower wages. But even though dollar effects of business tax incentives on the earnings of lower income groups are less, percentage effects on lower income groups are modestly greater.

In contrast, under most plausible distributional assumptions, even universal preschool programs will have dollar effects on earnings that are higher for lower income groups than for middle income groups, and for middle income groups than upper income groups. Therefore, preschool and most other early childhood programs are far more progressive in distributional effects than is true of traditional economic development strategies of business incentives. Programs that are successfully in directly increasing the skills of lower-skill groups can be far more successful in redistribution than programs that just provide untargeted jobs.

A closely related issue is whether early childhood programs should be targeted on disadvantaged children, or should be more universal in scope. This is really only an issue for more moderate cost preschool programs. No one is arguing that the most intensive early childhood programs should be universal.

There is a difficult political tradeoff. Based on what we know now, it is probably the case that targeted programs have a higher rate of return per dollar invested. On the other hand, under some plausible assumptions, universal programs may provide significant net benefits to the middle class, which is important both economically and politically.

The relatively sparse empirical evidence, from Bill Gormley's studies of Tulsa, suggest that universal preschool in Oklahoma yields large test score effects at kindergarten entrance for children from all the different income groups. The effects are perhaps somewhat larger for lower income groups. However, we need further evidence on this from other states as well as from longer-term studies of preschool's benefits for middle class children.

A fourth issue is how the national perspective differs from the state perspective on early childhood programs vs. business tax incentives as alternative economic development strategies. We know that many of the jobs created in a state by its business tax incentives would have otherwise been located somewhere else in the U.S. Therefore, the benefits of a state's tax incentives for its economic development are offset to a large degree by a loss of jobs in other states, and so national economic development benefits from these tax incentives will be much lower than state benefits. In contrast, some of the increased earnings of former participants in early childhood programs will accrue in other states that these former participants move to as adults. As a result, the economic development benefits from early childhood programs per dollar will be about one-third greater from a national perspective than from a state perspective.

The lower national benefits than state benefits of business tax incentives suggests that federal policy should seek to restrict state use of such incentives. Such restrictions have been advocated by Art Rolnick, former research director of the Minneapolis Fed. The European Union already has extensive regulation of such economic development incentives, far more extensive than is true of the federal government in the U.S.

The higher national benefits than state benefits of early childhood program provide a potential rationale for a federal subsidy of early childhood programs. The challenge is how to have a federal subsidy without impeding the needed local flexibility and innovation. One attractive alternative is to have much of the federal subsidy be devoted to improving staff training and curriculum development of early childhood programs, and to supporting high-quality evaluations and monitoring of a wide variety of state and local innovations in early childhood program delivery.

In sum, my book argues that high-quality early childhood programs should become an important part of state government strategies for economic development in the United States. These early childhood programs are a cost-effective way to provide support for a broad-based economic development that includes all income groups, and in fact helps lower and moderate income groups the most. The argument to state policymakers should be that such investments in early childhood programs can provide short-term as well as long-term benefits for states. These early childhood programs should have a great deal of state and local flexibility and innovation, which should be accompanied by rigorous evaluation. An appropriate federal role is to discourage state economic development strategies focused on business tax incentives, while encouraging early childhood programs and the evaluation of early childhood programs.