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Why Michigan (and Other States) Should Invest in Preschool

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Speech by Upjohn Institute Senior Economist Tim Bartik on Tuesday, January 11, 2011, to Detroit Area Grantsmakers group, Council of Michigan Foundations:

Why Michigan (and other states) should invest in preschool

My talk today will explain why Michigan, or indeed any state, should invest more in preschool.

My basic argument goes as follows. Expanding high quality preschool results in the former child participants in these programs having higher job skills, both hard skills and soft job skills, as adults. Many of these former child participants will remain in their home state as adults. The increase in the skill level of the state's population will attract more and better jobs to the state.

Let me at the outset be clear about what kind of preschool program I am talking about. I am talking about a program that would operate 3 hours per day, 5 days a week, during the school year for 4-year-olds. Research suggests that there are also benefits to having full day preschool, or preschool for 3-year-olds, but the bang for the buck is somewhat lower. The program would have a reasonable class size of perhaps 15 students. It would pay sufficiently high salaries to preschool teachers that the program could attract and retain quality teachers. The program would require teachers to have specific training in early childhood education. And the program would have a curriculum that would emphasize both hard, academic skills, as well as soft skills that deal with behavior and character. The estimated total cost for such a program would be about \$4,500 per student. If Michigan wanted such a program to be universally accessible to all 4-year-olds, we would need an additional \$300 million in funding from some combination of state government, local governments, and possibly parent fees, or about \$30 per Michigan resident. The state of Michigan currently spends about \$100 million on preschool, and over \$10 billion on K-12 education.

I must also at the outset clear away some mistaken models people have about how state economies develop. Many people assume that there's no point in attracting more or better labor supply, because the number and types of jobs will not change as a result. For example, people will say, "what's the point of sending more students to college if there aren't more jobs? These additional college graduates will just leave the state." The same could be said about preschool programs: even if successful, all we are doing is providing better trained workers for such foreign places as Ohio.

To which I say: this is nonsense. First, most Americans spend most of their working career in the state they were brought up in. Two-thirds of all Americans will spend their working career where they were brought up. And this percentage does not vary much with the health of the state economy.

Second, more and higher quality labor supply in a state attracts jobs. We live in a world in which transportation and communication costs have gone down so much that businesses don't need to be close to natural resource inputs or the markets for their products. But they do have to be located close to their workers. As a result, labor force quality is perhaps the most important component of a state's "business climate."

So, labor supply quality is critical to a state's economic development. But why stress preschool? After all, we can affect state labor supply by reforming K-12 education, increasing college access, increasing job training, and many other policies.

The basic reason for emphasizing preschool is that among all the policies to affect state labor supply, investing in preschool has about the most solid evidence of high bang for the buck.

The research evidence for the long-term effects of preschool largely comes from three high-quality studies. These three studies are the Perry Preschool Program in Ypsilanti, Michigan; the Abecedarian Program from North Carolina, and the Chicago Child-Parent Center Program. All three of these studies have good control groups that are quite comparable to the treatment group. All three of these studies follow their program participants into adulthood, so that we know effects on adult outcomes such as earnings.

These studies show unusually large returns. In my book, I compare the benefits to investing in preschool versus investing in lower class size in early elementary school. Lower class size in early elementary school has been shown by very good research to have economic benefits exceeding costs. But the benefit/cost ratio for a state economy from investing in universal preschool is two and a half times the benefit/cost ratio from investing in lower class size in early elementary school.

Two objections are commonly made to this research:

The first objection is whether preschool will work on a large scale. These favorable research results hold for small preschool programs run by researchers, but will they hold for large programs run by the average state?

However, there is good evidence that preschool works on a large scale when run by an average agency. The Chicago Child-Parent Center program was run at a large scale by Chicago Public Schools, and shows large long-term effects.

We also have good research evidence showing that many large state pre-k programs have large effects on kindergarten readiness. This evidence includes studies in the states of Oklahoma, South Carolina, West Virginia, New Mexico, New Jersey, and Michigan. Short-term effectiveness does not prove long-term effects. But these programs are all similar to the Chicago program in design, and show similar short-term effects, so it is reasonable that these programs will have similar long-term effects.

The second objection is that these studies just show effects of preschool for disadvantaged kids, so why would we want to expand preschool beyond the poor? Most preschool research has focused on disadvantaged children. But some evidence does suggest effects for the middle class and beyond. For example, the state of Oklahoma has 71% of all 4-year-olds in state funded preschool. Studies of Oklahoma show that middle class kids benefit just as much from preschool as lower class kids. It's also relevant that preschool enrollment in the U.S. follows a "U-shape": high among the poor due to Head

Start, low among the working class and middle class, and high among the upper class. The American upper class apparently thinks preschool works. The real issue is expanding access to the working class and middle class. In addition, research shows peer effect benefits from income-integrated preschool classrooms, so expanding a program beyond the poor is likely to help the poor as well.

But an important question is why preschool has such large long-term effects. How is it possible for a program that lasts 3 hours per day for one school year at age 4 to increase adult earnings by 60% for disadvantaged groups?

I think the most important part of the explanation is the crucial role of early soft skills development. One common criticism of preschool programs is that their test score effects tend to fade. Even for good preschool programs, if we look at tests of "hard," academic skills in reading and math, the short-term effects are perhaps reduced to only two-fifths of their original size by the time a student gets into middle school and high school.

But although hard skill effects tend to fade over time, soft skill effects tend to grow. By "soft skills," I mean aspects of the child's character and behavior. For example, how does the child interact with peers, and with authority figures such as the teacher? How self-confident is the child? Does the child believe that planning and making an effort will make a difference in affecting the world? A child who learns to interact better with the world in preschool will not only be more successful in preschool, but more successful in kindergarten. That success in kindergarten will encourage the child's self-confidence and improve the child's interactions with peers and teachers. And in turn that leads to more successful first grade, and so it goes. Success breeds success, and soft skills begets soft skills.

As a result of this initial success, the child with better soft skills is less likely to be assigned to special education. The child is also less likely to be retained in grade. Special education assignments and grade retention are cut by one-third due to high quality preschool. And we know that fewer special education assignments and less grade retention are associated with much higher high school graduation rates.

In the adult labor market, soft skills are at least as important as hard skills in explaining employment outcomes. Employers complain about finding workers with the right literacy and math skills, but they complain even more about finding employees who can get along with co-workers, customers, and supervisors, and who take the initiative and are able to be leaders. These soft skills are quite malleable at the pre-k age, due to the developing brain, and are the foundation for later success.

The net result of all this is that I estimate that for each dollar a state invests in a high quality preschool program, the net present value of future earnings of state residents increases by about \$3. So, the ratio of state economic development benefits to costs is 3-to-1. If the benefits to individuals who move out of state are included, the ratio of economic benefits to costs increases from 3-to-1 to 4-to-1.

One political problem is that the really big economic development benefits of preschool for a state economy are long-term. We're obviously not taking too many 4-year-olds in preschool and then sending them out into the labor force at age 5.

There are some economic development benefits in the short-term simply from spending more money. Preschool teachers eat at restaurants and buy things, and paying their salaries helps stimulate the state economy. There are also some economic development benefits because preschool provides parents with some free child care, which increases the labor force participation rates of parents.

But the biggest benefits of preschool occur when former child participants grow up and enter the labor market, particularly when they enter their prime earnings years. I estimate that in the first year a state implements a universal pre-k program, the earnings benefits of preschool are 22% of program costs. They gradually rise over time, but the ratio of state earnings benefits to costs doesn't exceed one for 24 years. We have to wait a generation for earnings benefits to exceed costs.

This is a disadvantage for political leaders, who often take a short-term perspective. Are there any short-term benefits from preschool?

One short-term benefit is reduced special education costs. As I mentioned, preschool reduces special education assignments by over one-third. Special education averages an extra \$10,000 per year in costs, and of course those costs may be incurred for 13 years, from kindergarten to grade 12. I estimate that if we start a preschool program, by the time the initial cohort has worked its way through the system, 13 years later, special education cost savings cover 48%, almost half, of annual costs for the preschool program.

These special education cost savings take 13 years to be fully realized. Four percent of costs are covered after one year, 8 percent after two years, etc. But significant benefits do occur quite quickly.

A second short-run benefit is increased property values. We know from very well-done studies that higher early elementary school test scores increase property values. The studies that reach this finding look at similar houses in the same neighborhood that happen to be on either side of an elementary school attendance boundary. The reason that elementary test scores affect property values is that parents take these test scores to be an indication of school quality, and this affects property bids.

If we use estimates of how much universal preschool is likely to affect 3rd grade test scores, and how much 3rd grade test scores affect property values, we conclude that the resulting increase in property values should be about 13 times the annual program costs of universal preschool. This effect should occur within 4 years, as the initial cohort of preschoolers gets to the 3rd grade.

I have been asked if this means that the poor will be hurt by universal preschool because housing rental prices will go up. No, the poor will not be significantly hurt, because it only takes very slight percentage increases in property values to be many times preschool's program costs. The percentage increase on

property values I'm talking about is only 1%, to yield property value effects of 13 times as great as annual program costs. The gains from universal preschool for the poor far exceed these small housing price increases.

In sum, preschool is a good investment. How is Michigan doing as an investor?

The answer is that Michigan is slightly below average, and far behind the leading states. Our state-financed pre-k program, the Great Start Readiness Program, has shown good results in rigorous evaluations. But the program's funding, at \$100 million per year, is sufficient to only enroll 19% of all 4-year-olds in the program. The national average is 25%. And some states are much higher. Oklahoma leads the way with 71% of all four-year-olds in state funded preschool. Other states with high preschool enrollment percentages include Florida at 67%, Georgia and Vermont at 53%, and West Virginia at 51%.

As I mentioned, if we wanted to get to Oklahoma's level of participation, which with Head Start added means that we would have universal accessibility, the total cost in the state of Michigan would be an additional \$300 million per year. But I should note that this would not necessarily all have to be state funding. Funds could be paid by local school districts or local governments. Some fees could also be paid by upper-income parents. It would be possible to imagine a universal system in which the state's additional costs were only \$200 million, and the remaining \$100 million was borne by other parties.

It is sensible in Michigan to build on the preschool programs we already have. Michigan has many good quality private preschools. The current state-funded preschool program provides grants to both private providers and school districts. It would be wise to continue allowing for a wide variety of choice among providers.

Finally, we need to have strong accountability for any expanded preschool program. It is quite feasible to have the same short tests administered both at entrance to preschool, and at entrance to kindergarten. If this is done, it is possible to rigorously measure preschool effects. Ideally these short tests would measure both "hard skills" and "soft skills."

In conclusion, the ultimate choice is whether we as a nation, and as a state, are still interested in making significant investments in our future. I have argued that preschool investments have significant short-term benefits for a state. But the really big benefits are long-term. It is the task of leaders to educate the public on the need for long-term investments. This is a task of political leaders, of private business leaders, and yes, of leaders of foundations. Thank you.