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Starting School at Four: Should Government Preschool Be Universal?

By Maria Donovan Fitzpatrick

Publicly subsidized pre-kindergarten (pre-K) programs have received considerable attention in recent years as an avenue for providing child care and promoting school readiness. Thirty-eight states currently fund pre-K programs; nationwide more than 1 million children were enrolled in state-funded pre-K programs in 2006-2007. Figure 1 shows that just in the last five years, enrollment of four-year-olds in state-funded pre-K increased by more than 50 percent. When children enrolled in the Head Start program are included, the number of children enrolled in government-funded early childhood education pro-

grams swells to almost 2 million.

Most of the ongoing programs, such as Head Start, target disadvantaged children in low-income families. However, three states – Georgia, Oklahoma, and Florida – have introduced universal public preschool programs. Campaigns also have been mounted in many other states including California, Virginia, and New York to expand access to government-subsidized preschool to all four-year-olds regardless of their families' income. Even president-elect Barack Obama has pledged to “help states

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About The Author

Maria Donovan Fitzpatrick

is a Searle Freedom Trust Postdoctoral Scholar at the Stanford Institute for Economic Policy Research. She received her BA in economics from University of North Carolina Chapel Hill and her MA and PhD degrees from the University of Virginia. Her research interests center on the economics of education, particularly early childhood education. Her latest publication, *Starting School at Four: The Effects of University Pre-Kindergarten on Children's Academic Achievement*, was published in the B.E. Press Journal of Economic Policy and Analysis in 2008.



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move toward voluntary universal preschool.¹ My research examines two critical questions: the costs and benefits of these programs. The results are fairly clear – targeted programs could have better results at much lower cost.

Background on Universal Pre-K

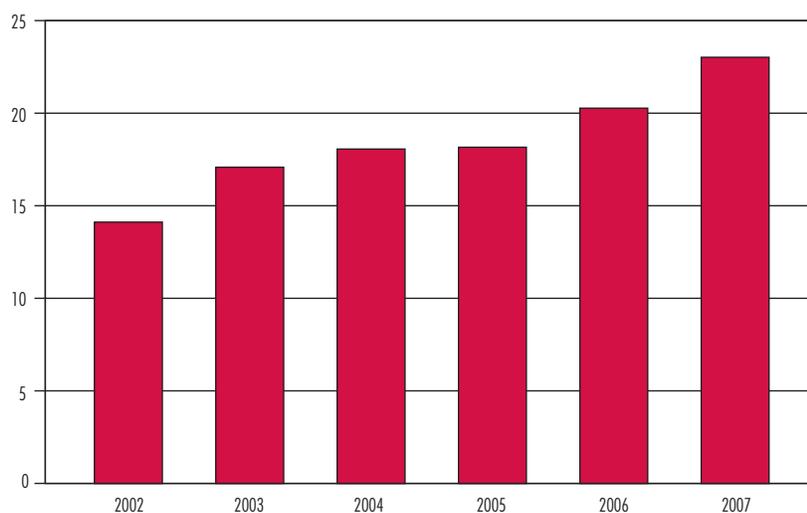
The recent expansion of and interest in early child-

hood education programs stems largely from the widely advertised success of a few model programs, including the Abecedarian and Perry preschool studies. These programs were generally large-scale multidimensional packages of interventions provided to small groups of very low-income families. They included an educational component (preschool) in which

the children were cared for in extremely small groups by high-quality, highly paid teachers with close monitoring by researchers. While the long-term success of these interventions at improving life outcomes (e.g., increasing wages, decreasing criminal activity) of participating children is widely accepted, it is not obvious that such large benefits would continue to be reaped once the programs scale up to serve entire communities. What is more, at anywhere from \$16,000 to \$41,000 per child, the programs were costly.²

Such costs are too high for state governments to fund similar intensive interventions for all residents. In contrast, the Georgia universal pre-K program spent \$4,010 per student in 2007-2008; in Oklahoma, the cost per child was \$3,433 in 2006-2007. These costs per pupil are lower than for the highly touted intensive interventions because the programs consist of classes that generally last between 3 and 6.5 hours a

FIGURE 1
Percent of Four-Year-Olds Enrolled in State Pre-Kindergarten Programs, Nationwide



Source: Barnett, W.S., J.T. Hustedt, A.H. Friedman, J.S. Boyd, and P. Ainsworth. 2007. *The State of Preschool 2007, The State of Preschool Yearbook*. National Institute for Early Education Research.

1 <http://www.barackobama.com/issues/education/>

2 Cost estimates are based on estimates from Fuller (2007) and have been updated to 2007 U.S. dollars.



day, and run five days a week for the length of the school year whereas the Abecedarian and Perry programs had much smaller class sizes and included non-classroom components such as home visit by teachers designed to engage mothers and children. Georgia and Oklahoma also allow enrollment in existing preschool centers, which reduces the cost of providing universal pre-K.

When making decisions about early childhood education with a limited budget, policymakers face a trade-off: Provide comprehensive intensive early childhood interventions targeted at disadvantaged children or offer smaller-scale education-based programs to all residents. Crucial to evaluating the choice is understanding the effects of universal pre-K programs. However, to date, much of the discussion of potential benefits of universal pre-K has involved extrapolating the estimated benefits of the

smaller intensive interventions targeted at disadvantaged students to the entire population. This extrapolation is problematic because children's education opportunities absent government intervention are not the same. In particular, many children would attend (high-quality) preschool programs absent public provision. It therefore is unlikely that all students will have the same potential to gain from universal pre-K programs as the students in the pilot programs.

Evidence on Pre-K Effectiveness

Early research on the Oklahoma universal pre-K program shows that participation in the program increases children's test scores one year later.³ However, while one study found gains for children across the board, another found that the increases in test scores accrued largely to minority and low-income populations.⁴

Most universal pre-K pro-

grams (those in existence and in the pipeline) are voluntary, so from a policy standpoint a more interesting question is the following: What are the overall effects of the government offering its citizens universal pre-K? Answering this question requires incorporating all children into the analysis, not just those that attend universal pre-K. An issue in both studies is that they measure the effects of participation only on children who participated. Additionally, it is not obvious that gains seen in kindergarten test scores will be maintained as children progress through school. Understanding the longer-term effects of universal pre-K is critical, since society cares about not just increasing test scores (and test scores in kindergarten), per se, but the improvement of life outcomes, such as wages and health, generally associated with better test scores.

³ Gormley, W.T. Jr., and T. Gayer. (2005) "Promoting School Readiness in Oklahoma: An Evaluation of Tulsa's PK Program." *Journal of Human Resources* 40(3): 533-554.

⁴ Gormley, W.T., Jr., T. Gayer, D. Phillips, and B. Dawson. (2005) "The Effects of Universal Pre-K on Cognitive Development." *Developmental Psychology* 41(6): 872-884.

The Effect of Georgia Universal Pre-K on Student Test Scores

My research focuses on measuring the effects of introducing universal pre-K on eligible children's long-term academic achievement. Because the programs are so new, I focus on the relationship between universal pre-K in Georgia (the oldest program) and fourth-grade test scores in reading and math. Effects may differ across the population, so I examine the impact of the program statewide and for different subgroups of the population based on characteristics that may be related to the families' options in the absence of universal pre-K, such as race, income, and residential area. I find that universal pre-K availability had no impact on statewide average test scores but significantly increased the average test scores of many groups of children in Georgia. Most notably, test score increases were the largest

for disadvantaged children living in rural areas.

Combining these increases in academic achievement with estimates of the relationship between test scores and future wages and the reported costs of the program, I compute a very simple measure of the return to the government's investment in universal pre-K.⁵ Unlike the large positive returns found for the model interventions given to low-income families discussed earlier,⁶ I find the costs to universal pre-K in Georgia greatly outweigh the academic benefits (by a ratio of six to one).

The Effect of Universal Pre-K on Maternal Labor Supply

There is another dimension along which universal pre-K programs might have affected children and their families: maternal labor supply. The argument often is made that a lack of affordable child care keeps parents

from working, particularly in low- to middle-income families. Program advocates argue that by providing several hours a day of time with the children out of the house at no cost to parents, universal pre-K is a child-care subsidy. This "extra time" may allow mothers to enter the workforce or increase their time in the workforce. My research suggests this is not the case; most women do not increase their labor force participation because of the availability of universal pre-K. The exception is that women in rural areas are 20 percent more likely to be employed because of universal pre-K. That the programs do not provide full workday (or eight-hour) care may prevent them from having much impact on the working patterns of mothers. Alternatively, it may be the case that most mothers who wish to be working are doing

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5 Full details of the cost-benefit calculation can be found in Fitzpatrick, M.D. (forthcoming) "Starting School at Four: The Effects of Universal Pre-K on Children's Academic Achievement." *Advances in Economic Analysis & Policy*.

6 Schweinhart, L.J., J. Montie, Z. Xiang, W.S. Barnett, C.R. Belfield, and M. Nores. (2005). *Lifetime Effects: The High/Scope Perry Preschool Study Through Age 40*. (Monographs of the High/Scope Educational Research Foundation, 14) Ypsilanti, MI: High/Scope Press.



so and using less formal modes of child care. Perhaps universal pre-K offers them a higher-quality day care alternative.

The Effects of Georgia Universal Pre-K on Enrollment

I also investigate whether universal pre-K programs in Georgia and Oklahoma induce any new preschool enrollment or whether they merely change who foots the bill for preschool participation. With enrollment levels of between 50 and 60 percent of four-year-olds, participation in universal pre-K is high. But, to the extent that enrollment in universal pre-K is enrollment that would have taken place without government intervention, the program is just a transfer of income from

the government to families of four-year-olds.

I find some increases in preschool participation, concentrated particularly in areas of low-population density, but nearly 80 percent of the enrollment is enrollment that would have occurred even in the program's absence. Nearly \$250 million is spent sending children to preschool who would have attended without the money from the government. A potential caveat is that if universal pre-K improves the quality of the preschool experience for all children, even those who would have attended other preschools, it might be possible to justify the costs. But the pattern of increases in test scores suggests the quality increases are either non-existent or ineffective.

Policy Implications

In fact, the sum of research on universal pre-K leads to one conclusion: The benefits of these universal programs are not universal. The gains associated with the program accrue largely to a few specific groups, namely those that are low-income, minorities, and/or those who live in less densely populated areas. That the results across these studies consistently find effects for these groups is striking and suggests that the government's money could be more efficiently spent if funds for preschool and early childhood education programs were targeted to certain groups, e.g., to rural school districts or to those with a large proportion of students who are low-income and/or minorities.

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