Preschool for All: State Level Improvements in Pre-K Education

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Executive Summary

Improving educational achievement, particularly for low-income and at-risk kids, has been a subject of policy discussion for several years. The so called "education gap" has been addressed through multiple programs on the federal, state, and local levels with some success. In President Obama's most recent State of the Union speech he made clear that his administration believes universal public preschool may be one way to address disparities in US education. By enrolling children in preschool before they begin kindergarten, children will start school on a more even playing field and gain long term benefits from early education. Since low-income and at-risk kids benefit the most from preschool programs, as they have the most catching up to do, expanding access for this demographic is key to decreasing the education gap.

This study evaluates different methods of implementation for preschool education at the state level for four-year-olds. We examined efforts to expand access for lower income children in particular through universal school systems, grants, vouchers, and sliding scale co-pays. Of particular interest was the capacity of each implementation scheme to accommodate a variety of families' educational and child care needs. From this data, we identified the voucher system—with a score of 4.7 out of 5—as the most successful state practice, yielding the most beneficial preschool outcomes and resources for families while working with tight state budgets. Our recommendation focuses on the advantages of a voucher system for states planning to implement or expand their preschool system. We recommend a state-level voucher system, which allots a stipend to families under a state-determined income threshold, we recommend 200% of the poverty level and below, allowing families to send their children to any approved pre-kindergarten institution they choose, private, non-profit, or public. This aligns preschool development funds with the preferences and needs of low-income families, and induces competition between programs to expand and raise the quality of preschools in the United States while driving down prices.

The Status of U.S. Preschool Programs

The Value of a Preschool Education

Economists have considered education a public good since Adam Smith wrote as much in *The Wealth of Nations*. Education confers greater skills upon a population, making them more productive, increasing the aggregate output of a society and lifting all members of society to greater prosperity. Beyond sheer economic productivity, education also provides the skills essential to democratic citizenship. Literacy, an understanding of history and civics, and critical thinking are vital to an informed electorate that holds its government accountable. When access to education is limited, the steepened gradient of abilities leads to greater inequality, which leads to political instability, which can disrupt markets and society as a whole.

The resources required to provide preschool are relatively limited, but the returns on this investment are huge. Preschool represents a promising starting point, where targeted interventions can project years of social improvement for children, their families, and communities. Because education, including preschool, is a merit good, the benefits from providing this good to some benefit all of society. If the private market and/or government are not providing enough merit goods to produce such a benefit, this could result in a market failure.

Preschool renders the greatest benefits for low-income and at-risk kids who may not have the same access to enrichment activities during early childhood, a critical period for growth and learning. By providing a supportive, educational atmosphere focused on their physical and intellectual development, preschools can help mitigate the effects of poverty on children's academic performance. This will result in more skilled and productive students, who create vastly more additional value over the course of their lives than the relatively small initial investment by society in their preschool education.

Study after study have lauded the incredible value of preschool to developing children. According to Loeb et al. (2007), center-based preschool education raises math and reading scores for children, and increased hours per day and intensity of the program only enhances these effects. Such patterns have been found across income distributions. One of the earliest studies on preschool education, the Carolina Abecedarian Project (2013), found that academic achievement, attainment, and cognitive skills were higher even at age 21 if children had gone to preschool. The children who participated in the program were more likely to attend college, and the childcare support meant their mothers were more likely to achieve higher educational pursuits, especially teen mothers. According to a study by Psychology Today, children who had access to preschools went on to attain more education and higher incomes, and were more likely

to have health care and less likely to have criminal records (Gowin, 2011). These studies demonstrate the ability of preschool to help break the cycle of poverty and it's importance for low-income children in particular who are most at risk of falling behind their peers.

While preschool improves educational attainment and society overall, it is particularly important to focus limited state and federal resources on low-income and at risk children, who lack the opportunities and educational foundations of their wealthier peers. Public investment early in life can help break cycles of poverty and crime, and produce well educated, contributing members of society.

History of Education Reform and Our Current National Standing

The first state preschool program was in Wisconsin, which implemented its still operating program in 1873 just a few years after becoming a state in 1848. It is still geared specifically towards four-year-olds (NIEER, 2011). In 1965, as part of Johnson's Great Society program, the Federal government launched the Head Start program. Initially a summer enrichment program to help prepare underprivileged children for kindergarten, Head Start has expanded substantially since its inception. The program now provides education and healthcare services to one million children and their families each year, and its work in this area of education has set the standards for preschools across the U.S (U.S. Dept. of Health and Human Services, n.d.). Head Start aid is still administered directly by the federal government to district-level programs, bypassing state governments entirely. This feature of the program was designed to thwart interference by Jim Crow states, but now complicates the landscape of preschool provision.

Starting in the 1980s, several states began implementing programs to provide additional access to preschool for low-income families. This movement gained momentum through the 1990s, and now 39 out of 50 states and the District of Columbia have some form of public preschool, most targeted towards low-income or at-risk children (U.S. Dept. of Health and Human Services, 2003). These preschool programs tend to vary in their implementation, some states utilizing a competitive or noncompetitive grant system, a voucher system for needy families, or a non-discriminating universal program open to all age-eligible students. Shortly after starting its preschool program in 1993, Georgia was the first state to offer a universal preschool program beginning in 1995. Georgia funds this universal program with state lottery revenues, allowing a broad array of students to attend (NIEER, 2011). Some states rely on federal Head Start funds, as well as state taxes, to fund their preschool programs, though services tend to vary widely from state to state.

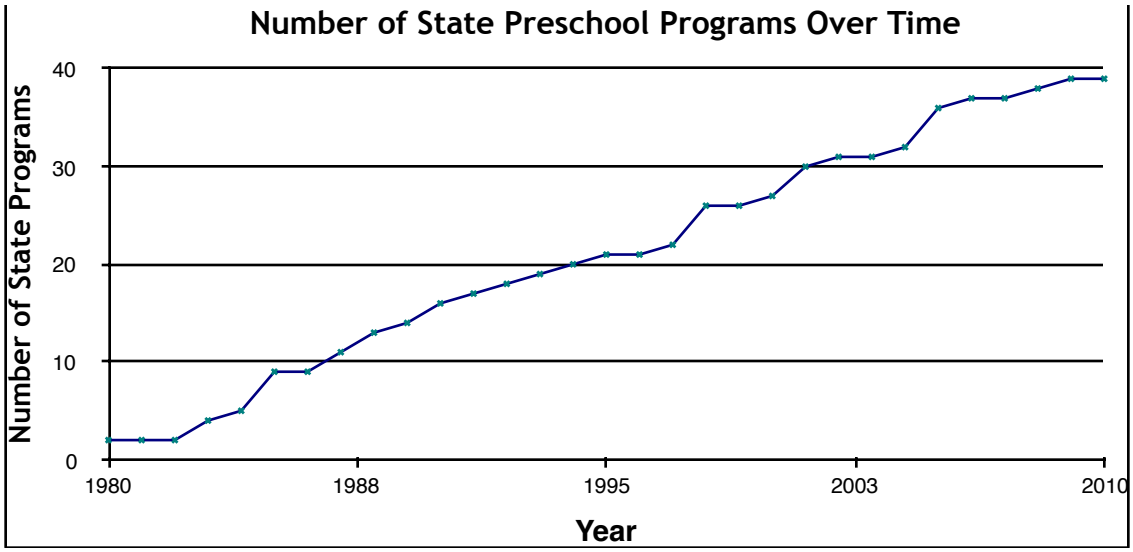

Figure 1. Increase in Preschool Programs Provided by States Since 1998

President Obama's Preschool Proposal

Given the increased recent attention to the value of preschool education, President Obama has made it a priority for his second term to expand access to preschool at the state level through his "Preschool for All" initiative. Since many states already use Head Start funds, we will investigate best practices across various states to see how states can use additional resources to develop preschool programs that most efficiently achieve their desired outcomes. By expanding availability at the state level, the federal government empowers states to create programs that best serve their population's needs. Some states currently target low-income families, while others target special needs or at-risk kids. President Obama's plan addresses states' needs by offering state-specific funding based on the number of 4-year-olds in the state and how many are in families whose incomes are at or below 200% of the federal poverty line (FPL) . Funding would also be determined by what preschool programs states already have in place and how many 4-year-olds under the 200% poverty line threshold the state currently serves, in order to induce states to turn to a universal rather than just a targeted program. This federal-state partnership can give states the resources and flexibility they need to implement high quality preschool programs without crowding out existing state programs. This undertaking could initially benefit as many as 1.67 million four-year-olds who are eligible but do not attend high quality preschools. President Obama plans to fund the proposed $75 billion program with an increased tobacco tax, from $1.01 per pack of cigarettes to $1.95 (NIEER, 2013).

State Efforts

States have taken very different approaches to providing preschool for their citizens. The following states each represent a very different, but functional, approach to providing preschool education for children. The following three states, out of 39 current providers, are among many programs that states in the nascent stages of their program may look to for guidance.

Oklahoma

Oklahoma's Early Childhood Four-Year-Old Program began in 1980 as a push to provide preschool to all 4-year-olds in the state. In 1990, with the help of statewide funding, the program expanded to serve all 4-year-olds eligible for Head Start. By incorporating local funding and charging tuition for children above the poverty threshold, Oklahoma continued to expand the program through the 1990's, and in 1998 became the second state, after Georgia, to offer free, universal preschool to all 4-year-olds. As of 2011, 89% of eligible 4-year-olds were enrolled in state and Head Start Programs. In addition to publicly administered preschool programs, the state allows districts to subcontract by placing public school teachers in community-based programs, child care centers, and Head Start programs. In all cases, districts receive funding from the states on a per-pupil basis, and all students of Oklahoma's preschool programs receive the same services as the ones in public school settings. Oklahoma is now revamping their Reading Sufficiency Act to ensure that students are meeting grade level requirements by 3rd grade, and will rely heavily on the Early Childhood program to lay the foundations of this endeavor (NIEER, 2011).

New Jersey

New Jersey provides preschool services to about 28% of eligible 4-year-olds, and is noteworthy as the state with the greatest funding per pupil, about $11,700 in 2011. The oldest and largest program, the former Abbott Preschool Program, was established in 1998 and serves 35 school districts. Schools in this program offer subsidies to families with incomes up to 300% of the federal poverty level, and also offer extended day and extended year services to needy families. In addition to the former Abbott program, New Jersey also funds the Early Childhood Program Aid (ECPA) and the Early Launch to Learning Initiative (ELLI) which serve additional districts with large populations of children who qualify for free or reduced-price lunch. An ambitious 2008 School Funding Reform Act aimed to put New Jersey on track to expand full-day preschool to all at risk students, serving an additional 30,000 children by 2013. While existing programs offer quality preschool and many expanded services like extended days and years, flat-funding in recent years has slowed the expansion of the program and hindered greater enrollment numbers (NIEER, 2011).

Connecticut

Connecticut established the Connecticut School Readiness Program in 1997. This program provides preschool funding for 19 designated Priority Districts, and offers competitive grants to the 50 lowest-income towns in the state outside of these Priority Districts. Connecticut mandates that at least 60% of students enrolled in this program must be below 75% of the state median income. Funding from this program is available to public schools, Head Start programs, and private and faith-based child care centers. The program offers many accessibility-enhancement features, such as "wrap-around" full day slots that operate 7-10 hours per day, 50 weeks per year, facilitating erratic parental work schedules. The state is still in the phase of expanding access to lower-income families and students, and expanded service hours allow parents with long work hours to take advantage of preschool services for their children. Connecticut has also begun a professional development program called "Training Wheels" that trains prospective teachers on the use of the Connecticut Learning Standards and Assessment framework. This is part of a push to raise the baseline of teacher qualifications by 2015 (NIEER, 2011).

Tools for More Successful Preschool Systems

Obama's most recent State of the Union Address cites the need for steadfast action in implementing universal preschool. In the newly released *Preschool for All* Initiative (NIEER, 2013), the Department of Education describes key attributes for successful preschool systems. Among these are high minimum certifications for teachers (typically a bachelor's), salaries similar to teachers in K-12 education, low student-to-staff ratios in the classroom, small class sizes, extended full-day programs, high quality and result-proven curricula, comprehensive on-site services for all children, and routine program evaluation measures to gauge student development and program progress and quality.

Within our own state-by-state data, we found that most programs aimed to establish a generic teacher education and meal requirement, along with supplemental support services for children. We see immense program success in states like Oklahoma that have enacted full-day programs and mandated provision of school lunches. Similarly we found that Tennessee, another state highly-ranked for preschool education, offers full-day programs. Tennessee requires that preschool institutions run for 5 1/2 hours per day, five days a week. The NIEER (2011) also gave Tennessee a near perfect score on achieving benchmark quality standards, further endorsing its specific program methodology.

Low student-to-staff ratios are not a requirement that Head Start or most state preschool programs demand that schools to meet. Yet, the smaller class sizes allow for more teacher and student interaction, foster a closer connection and stream of communication between the two,

and allow the student to receive a more personalized and enriching experience. We found that the average student-to-staff ratio was consistently 10:1 or lower in states implementing effective, sustainable programs, such as North Carolina, New Jersey, Georgia, and Florida (NIEER, 2011). The smaller student-to-staff ratios of these state programs typically correlated to the availability of at least one student meal a day. All successful state programs with a student-to-staff ratio less than 10:1 provide a meal during the school day.

What States are Doing—And Why it's Not Enough

Why Policy Action is Necessary

Enrollment in state-funded preschool is currently at its highest level yet, but many states are now considering or have already cut funding for these programs. The recent 2008 crash put states in a difficult position when creating budgets for upcoming fiscal years. In the 2010-2011 school year, state-level funding for preschool education declined by $60 million, and one state, Arizona, cut its preschool program altogether. Over the past 10 years average funding per child declined by $700, which is striking considering the 2011 average aggregated spending per child was $5,518.21. Unfortunately there is no end in sight for state cuts to preschool funding, as overall funding was cut again for the 2012-2013 school year. And funding cuts are just the tip of the iceberg. Combined with budget cuts, states are cutting services and standards so they can afford preschool education, even if it is cheaper, lower quality child care. Other programs have substituted quality for quantity, enrolling more children in a program that does not meet high educational standards. Four states currently offering preschool programs reduced their quality standards benchmarks for the 2010-2011 school year. Program monitoring has also decreased, making quality enforcement and analysis of program success more difficult (NIEER, 2011).

Given the benefits outlined previously, and the failure of both the private sector and governments to provide enough quality early education to benefit society as a whole, the case for government intervention is strong. Universal preschool that targets low income and at risk children can address the glaring lack of equity when it comes to education access, but there are other options that we will address too. While Head Start has begun to increase access to those most in need, states have also begun programs that increase access to various populations.

The return on investment has been estimated at roughly $8 for every $1 invested in early education and preschool (NIEER, 2011). The return on investment for government and society as a whole are huge, and at a time when budgets are being slashed we cannot afford to place education on the chopping block. Private preschools that commonly have a lofty price tag and inflexible schedules limit access for low income families to early education. Government

financed programs that increases flexibility and accommodation for parents are necessary to reach all children and families in need of early education. This publically provided type of program represents an investment in the futures of our children and our country, and will help to close the education gap and deliver results in the classroom and beyond.

Research Overview

In order to develop a plan for universal preschool implementation, we had to investigate states' best practices. We then determined metrics to evaluate impacts and effectiveness, accessibility for low-income families, and the way services were provided to families. Since early education programs vary widely across the nation, our research involved a state-by-state analysis of these questions in order to develop a national picture of preschool implementation. From there, we drew from these best practices to design a Federal approach and compile suggestions for states to improve their present programs. Head Start is the first iteration of this sort of national program, but also provides expanded services ranging from early education to health services to social services for low-income families.

Much of the information on best practices has come from states like Oklahoma and Georgia whose universal preschool programs are already underway. Many other states are also rolling out preschool programs that specifically target low-income families, restricting eligibility to a set income level, often below 200% of the federal poverty level. Much of our state data came from the National Institute for Early Education Research (NIEER, 2011), which provides data on each state's programs. Specifics include meals provided and hours of the program, funding amounts, Head Start activity, the number of children enrolled in these state programs, NIEER's evaluation of each state's program, and the quality standards the states have set for their programs. This resource allowed us to compare states' programs, as well as compare these state programs to Head Start, which many states incorporate into their preschool provision frameworks. NIEER data allowed us to compare levels of participation and funding per student across state lines, which in turn helped compare program effectiveness. NIEER also allowed us to examine how these programs have targeted low-income and at-risk kids. They compile data on the hours of operation for each program, programming over the summer, day care availability, family and student eligibility, and any additional resources provided to students and parents who participate in the state-run programs.

President Obama has made the creation of a national preschool program a second term priority because his administration believes this will improve student performance. Some critics have raised controversy around the effectiveness of preschool at changing attainment outcomes,

questioning whether preschool programs are effective enough to justify their costs. Academic papers from Stanford (Loeb et al., 2007) and UNC (2013), and a study by the Department of Health and Human Services (2013) all found generally positive results for prekindergarten education, but with a few important caveats. The improvements in emotional disposition and verbal skills were prone to decay if a high level of instruction did not continue through early elementary school. This means that, no matter how much money we spend on publically offered preschool, if elementary schools are not restructured to continue the progress early education makes, that progress will dissipate by third grade. The other important caveat was that the improved outcomes were mainly concentrated in lower-income children, and that early education had fewer benefits for children of affluent families. These sources ascribe this disparity to the fact that affluent parents can afford other enrichment activities for their children, as well as extracurricular programs that help them stay ahead of flagging elementary school standards. From this we learn that basic preschool alone will not provide the improved outcomes that the Obama Administration desires. If a preschool program is to be effective, it must come as part of a broader expansion of education resources, especially to lower income children, to ensure the gains made by early childhood education are not lost. Several articles noted that some state programs provide medical care, meals, and other resources to both students and their families, which may add additional benefits to students above and beyond the learning they receive in the classroom.

Test scores are the most common metric for evaluating school effectiveness, and the National Center for Education Statistics (NCES) maintains test score data for 4th grade and 8th grade reading and math scores across all 50 states (U.S. Dept. of Education, 2011a, 2011b). These scores will allow us to evaluate education results in each state, and will hopefully offer insight on the effectiveness of their preschool programs. Unfortunately, as noted above, there are many confounding factors in these scores that may limit their usefulness when it comes to evaluating preschools. Many proponents also cite a reduction in juvenile delinquency as a positive outcome of early education, but causality is difficult to identify amidst so many confounding factors. The sort of research that would really aid in evaluating preschool effectiveness would be longitudinal studies that include children of different incomes, different types of preschool or the lack thereof, and their life outcomes with respect to test scores, criminal activity, college education, etc. One such study, entitled *Lifetime Effects: The High/Scope Perry Preschool Study Through Age 40* (2005) did investigate these effects, and its findings support intervention to create more preschool programs across the country. The study traced the progress of 123 lower-income African-American children who were randomly divided into two cohorts. One group attended a top-quality preschool, and one group attended no preschool. Children attended schools between 1962 and 1967, and after 40 years, they interviewed 97% of the still-living participants. They

found, overwhelmingly, that adults who had attended preschool were more likely to have graduated high school, more likely to hold a job, and had committed fewer crimes, than adults who had not. These students experienced a fundamental directional shift in their lives due to preschool, a service that should be available to all American children.

Funding for these programs comes from a variety of sources, almost all publicly financed. NIEER data on funding streams for each state's preschool programs led us to conclude that the majority of programs were funded by a combination of Head Start and various state tax funds. Having a stable source of funding allows programs to deliver consistent results year after year. Most private preschool programs charge tuition, which provides them with a stable source of revenue that meets their operating needs. This model will not serve for early education though, as not all families can afford these private program tuition costs. In addition to Head Start grants and state tax funds, preschools could reach out to local, private donors to support operations, but this practice runs the risk of introducing unpredictable fluctuations to their budgets. Some programs also require certain families, if their income is high enough, to pay a percentage of or lump fee towards their preschool tuition, though this may or may not bring in sustainable funds. Competitive grant programs and vouchers each allow states to harness market forces to allocate limited funds more efficiently. Preschool programs present their models and operational history to the state, which then disburses grant funds to the most effective programs. This allows the state to detail specific expectations, and then cultivate a preschool system in which the participating programs are the most capable of achieving those goals.

Any national preschool program or state recommendations will draw from the lessons that state-level programs thus far have learned, and will offer states flexibility to implement programs in their specific cost and experience environment. We will evaluate the effectiveness of our proposals on the basis of the criteria outlined in the next section. These account for the challenges that opening and expanding a preschool program involve, and place greater weight on those elements of the project that will most strongly affect its feasibility.

Evaluative Criteria

Using data from NIEER (2011) and elsewhere, we conducted analysis of the current 39 states with active programs to give each option a score on the following criteria. Note that 39 states make for an unusually small data set, so some calculations and statistical relationships should be viewed carefully. To supplement this small data source, we also examined case studies, previous statistical reviews, and published experiments and meta analysis on state preschool programs.

Weighting Criteria

In order to provide a more comprehensive analysis, we weighted each criterion to reflect our program priorities. The weights were determined by relevance to program implementation. We deemed "cost" and "targeting" to have the highest importance, and each counts toward 25% of the overall program score. "Test scores" and "universality" each count toward 15% of the overall score, and "family support" and "program structure" each count for 10%.

Cost: 25%

In light of the recent economic recession, the feasibility, both politically and fiscally, of any government policy relies in large part on the cost of the program. Budget cuts have already forced many states to reduce, or cut completely, their funding for these programs. Education funding is by nature a large up-front investment with long-range returns, so the lower the up-front costs the more likely the policy will become a reality. We incorporate the state cost per student, the total amount spent per student, and the estimated overall cost of the program. The overall cost is calculated using the cost per student and the estimated enrollment for each program. We set 50% enrollment as successful implementation of current state programs, and used this estimate to determine the average cost for each type of preschool framework. Current state preschool programs acted as our models in deriving these calculations and estimated program costs.

Targeting: 25%

The original purpose of this analysis was to identify practices that will make preschool available to low-income families. The benefits of preschool are largely available through the private market to those who can afford them, and we aim to extend those benefits to low-income families. Therefore, how well a program avails itself to these families is as important as the cost of the intervention. We will look at the state's attention to need-based services, and income or other eligibility requirements to enroll. The eligibility requirements should prefer families who have income below the federal poverty level, are eligible for free or reduced price lunch, are headed by teenagers or single parents, or by parents lacking high school degrees. They may also consider students or families who exhibit risk factors such as English as a second language, special developmental or learning needs, foster care, family drug abuse, a history of family violence or other background trauma, or family members on active military duty. We combined these variables to come up with an overall targeting score for each policy option, and examined current state programs to see how well each option performs on this variable at present. Targeting is specifically about getting low-income and at-risk kids into preschool programs, not about how many children are in each program which is covered by the universal criterion.

Test Scores: 15%

Test scores are a valuable way of assessing program effectiveness, and will help us measure determine what is working and what needs restructuring. The test scores come from all students regardless of individual preschool attendance, so because of limited data we only examined directional correlations after finding no statistically significant results. We discuss this limitation later in our sensitivity analysis section. The test scores criteria owes its smaller relative weight to the lack of specific test scores for state preschool program attendants. We can still compare states that had preschool programs in place when test-takers were of age, and recommend practices that seem to correlate with higher scores. We determined 1998 to be the last year preschools could have yielded current 8th grade-age students. States with programs implemented before and after 1998 will be segmented into two groups for analysis. We examine NAEP test scores for 4th and 8th grade students as of 2009 (U.S. Dept. of Education, 2011a, 2011b). To complement this analysis since our data set will be very small, particularly once broken down by program type for each state, we will use case studies and other previously completed analyses, both case studies and longitudinal surveys to determine test scores for each option. We elaborate on these findings in the option section.

Universality: 15%

This criterion goes beyond targeting to see how close states come to making their programs accessible to all four-year-old children regardless of family income or at-risk status. The benefits of preschool will be greatest if the service is available and accessible to everyone, since this will raise expectations going into kindergarten. This will fuel a change in curricula, eliminating wasteful catch-up time and providing benefits to both students and schools. Universality also strengthens a cultural expectation that people will use preschool, which again improves educational outcomes across the board and leads to a well educated and dynamic workforce. This is on the same level of importance as test scores because it is a good metric for evaluating effectiveness, but is not as integral as cost or targeting for this analysis. Targeting was deemed more important than universality because including those most in need is a higher priority than providing universal service that includes those who can and do pay for private or other preschool services. Students most in need of preschool will fall behind in school faster than those who come from more educated backgrounds or are already attending a preschool program. Many states are also far from a completely universal program despite high four-year-old attendance, making it difficult to determine which options would induce the highest use by students and families. In qualifying programs on universality, we will look at how the program expands access by reaching the greater number of students.

Family Support: 10%

Family support is a subsidiary element of targeting, and will increase costs but improve access to needed services for low-income families. This balance of costs and benefits is visible through NIEER data on best practices, and will help us design our expectations for programs that would be included in any grant-making or voucher program. This receives a relatively low weight because its primary use is to discover best supplemental practices, rather to evaluate overall program feasibility. In analyzing family support we will consider each options' overall transportation and equipment offerings, meal availabilities, flexible hour schedule, after-school care options, on-site monitoring, school year length, and screening/referral and support services. These services help parents and families to support their child's early education and also pursue other necessary activities such as education and work, while not falling behind on financial or time restrained obligations that could hinder a child's preschool development. For our data analysis, we gave each state's program a score from zero to one on family support, and used this to calculate the final score for each proposed option. Children learn best when they are well fed, in good health, and have a quality program that facilities best early education practices. That is why program-based support for family needs is an important element of our analysis.

Program Structure: 10%

Like Family Support, Program Structure helps us identify best-practices, based on our NIEER data and NAEP scores. This criterion will be used to design our expectations for preschool programs, what leads to the best outcomes for students, what will be necessary for programs to qualify for state funding, and will set the standards for preschool programs going forward. Program structure consists of student-teacher ratios, teacher education level, and length of school day, among other factors. The NIEER program rankings for states' current preschool programs also play a part in our program structure analysis. We will examine each state's current system and subjectively devise a comprehensive score for overall program structure for each option. Because of the subjective nature of this criterion, and the difficulty in predicting which option will result in the best practices, program structure only received a 10% weight, though this does not mean it should have a diminished importance in our analysis. Quality program structures will likely lead to high performing student outcomes in the future, and further federal and local support of state preschool programs.

Options

We have outlined four different approaches based on the past two decades of state-level experimentation with different styles of preschool programs. Each of these approaches focuses on making the program accessible to low-income students in the most cost-effective way possible, while creating incentives for growth and operational development. We collected data

we believed pertinent and impactful to a preschool program's success and sustainability. After examining our data, we developed the following policy options:

1. **Expanded Elementary Education (Universal)**
2. **Competitive Grant**
3. **Voucher**
4. **Sliding Scale Co-pay**

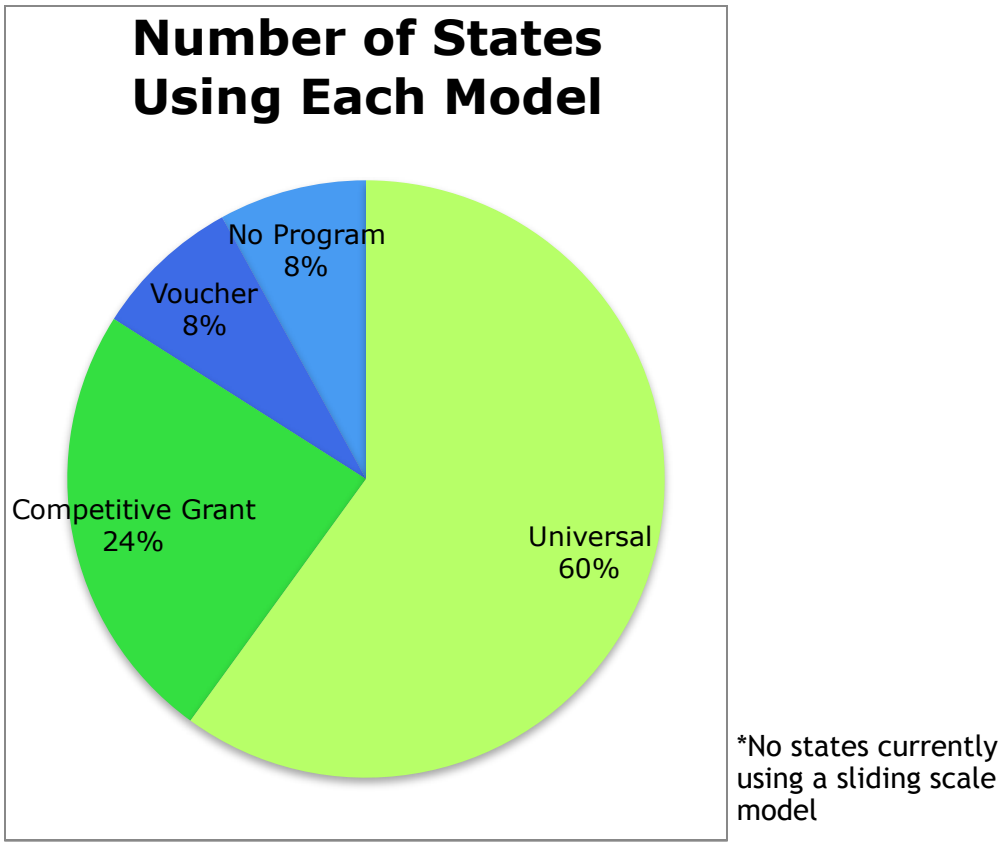

Figure 2. State Preschool Program Models by Type

In examining our data, we first created binary variables to describe different plausible program types, subjectively determining which states fit best into which program type. Our first variable was a "grant" program. 23 states use a grant method, in which public and private institutions apply for funding to sustain pre-kindergarten curriculums with various qualifications and/or eligibility requirements imposed on applicants. The grant method is the most common model used in the United States. Second, we created "universal" to incorporate all states currently implementing a program that was available to all children, regardless of socioeconomic status. A universal method here implies adding a preceding year to the public elementary system; it would merely tack on an extra year to our current school structure. Lastly, we created variables for

"voucher" and "sliding scale" programs. Similar in design, the voucher and sliding scale models intend to provide subsidies directly to families below the federal poverty line (FPL) in order to send their children to preschool. The voucher system gives a flat fee to all families who fall under 200% of the FPL. The sliding scale model also gives tuition support, but the grant amount diminishes as family incomes rises above a certain percentage of the FPL. Arkansas uses a sliding scale model, and only in limited circumstances so we did not include it in our variable for that option. There are four states using the voucher model. See Appendix C for a breakdown of states and their preschool programs.

Option 1: Expand Public Elementary Education to Begin with Prekindergarten—Universal

The Oklahoma Model

This option borrows from the model established by Oklahoma, providing preschool education to four-year-old children statewide, regardless of income. It would essentially function as an additional year of elementary education, administered by public school districts and ideally even housed in existing school facilities with similar structural elements. The implementation of an additional school year might prove a challenge for schools contained in buildings with limited space, or may be beneficial to school districts who already have facilities in place. This option would allow states to set the expectations and standards for preschool programs to align with those that exist for the rest of their K-12 education system. Integrating preschool fully into the education track would project effects down several years of schooling, since this option reaches the broadest swath of participants. The true universality of expanding public education to include preschool will help address the problem of backsliding for low-income students by providing all students with a level playing field early on. Preschool would no longer provide an advantage only to those who can afford it, while leaving those who cannot farther behind. Instead it would represent a new starting point for all students, raising the bar for each subsequent grade as the progress of preschool becomes accounted for. Teachers of Kindergarten, first, and second grades can expect that every student enters their class with a baseline from a statewide preschool program. They can then adjust their teaching accordingly, building on the gains made by preschool and raising standards for the whole system.

Program Description and Data Analysis

States would disburse funds through school districts to pay for teachers, classroom spaces, class supplies, and all of the other support necessary for the program to run. Those programs serving eligible students and communities could still use federal Head Start funds to help offset costs. This option would certainly be the most expensive, as it calls for states to expand education

services to include an additional year's worth of classroom spaces, teachers, supplies, transportation, meals, and after school care. The provision of these extra services makes this option attractive to low income families, who can rely on these programs for low cost childcare and nutrition support that they may otherwise struggle to afford. Based on average state expenditures per student and average state populations, the average state would pay about $229 million per year to extend preschool services to 50% of eligible four-year-olds. We estimated this cost by analyzing the 12 states we considered to have such a program already in place, and extrapolating those costs to the entire four-year-old population. One major impediment not considered by this cost is facilities, as it will take several years of investment by the states to develop the infrastructure to support these children before states even began to pay that operating cost.

Despite this large overall cost, we found that for the twelve states that currently have universal preschool programs, the average state expenditure per student is $3,852.75, the lowest cost of the three options states currently have in place. Total expenditure per student (state plus federal funds) is also the lowest, at $4,924.50 per student. This suggests that while expanded elementary programs may cost more overall, this may be because of fixed and initial costs, or the larger population such a program serves. We factored this into our scoring for cost.

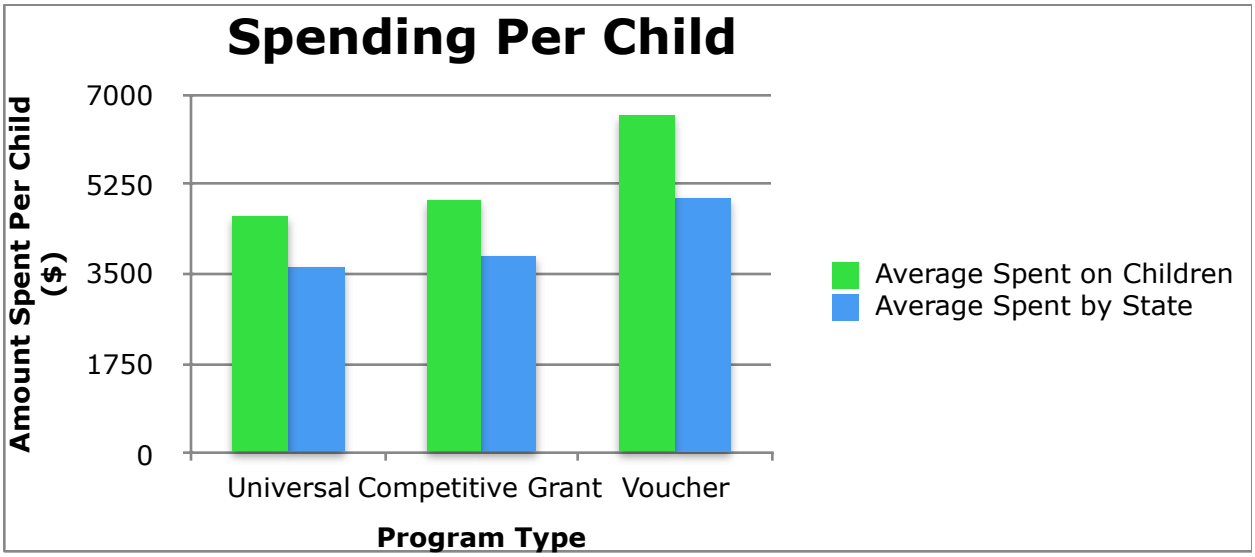

Figure 3. Preschool Spending by Program Type

On the performance scale, however, expanded elementary education does not perform as well. Such universal programs scored a 6.86 on average on the NIEER quality rating out of 10, the lowest of the three state options. This raises concerns about implementation, and ensuring quality while also focusing on quantity of students enrolled. Similarly, universal programs

scored the lowest on family support, getting a .58 out of 1, which falls short of our expectation that this program would offer significant resources to parents and families outside of the classroom. Again, this may indicate that these programs face financial difficulties keeping up with demand for services and quality. These difficulties would need to be addressed in any newly implemented state programs.

As mentioned earlier, we found no statistically significant relationships between universal programs and test scores. As a result, we conjecture that the inclusion of an extra year of schooling would cause test scores to rise slightly, but that this would only raise underperforming schools to meet the average performing on par with current public schools.

Universal programs do tend to serve a large portion of the population, and we found a 64% correlation between a state program being universal and the percent of the eligible population served. On average, expanded elementary programs currently serve 48% of four-year-olds in their states, the highest percentage overall, compared to an average of 27.61% of four-year-olds served in all state programs. Universal programs emphasize openness and non-discrimination toward the enrollment of eligible students.

Contrary to our program design for an expanded elementary system, states that currently provide such a program are not performing as well as we had assumed. The time and money states will use to construct additional classroom space and train additional teachers to handle an ever larger group of students may render this option prohibitive, so we turn to some mixed private-public options for more streamlined programs.

Option 2: Competitive Grant Program

Today, programs that provide preschool to low-income children compete for Head Start funds, which are dispersed directly from the federal government to local-level programs. The Department of Education sets its expectations—how many children the program must serve, the income level of eligible families, the level of education the teachers must possess—and then grants fund programs that meet these criteria. This competitive grant would follow our current format, offering organization-building grants to both public and private programs.

Eligibility

In order to increase state input about programs and standards, states will design their own set of criteria, over and above a set of federal criteria, by which to assess preschool programs. States

will then disburse grant monies, partially from the federal government and partly from their own coffers, to programs that meet these expectations. This creates an incentive for programs to improve in order to receive support funding, as well as offering additional funds to proven programs. This also allows a diverse array of actors to enter the preschool market. For example, if a cohort of businesses in a community decided to pool resources and open a preschool facility for their employees, they could use the state guidelines to construct the program and then apply for grant funding from the state.

In order to receive grant monies, these programs must specifically target low-income families, though the threshold is for states to determine. A model program might include the following provisions: free access to families under 200% of the federal poverty level, provision of meals, transportation support, extended after-school care, 10:1 student-teacher ratios, and a Bachelor degree minimum for teachers.

Massachusetts Model

In attempts to positively progress the development of early childhood education, Massachusetts developed a Universal Pre-Kindergarten (UPK) Classroom Quality grant program . The intention behind the grant program is to disseminate funding towards established institutions in need of raised teaching standards and expanded pupil size. UPK chooses school programs that show potential to be ameliorated by extra attention and financial support. According to the Massachusetts Department of Early Education and Care there are currently 238 preschools aided by the grant program, out of the total 10,554 organizations geared towards preschool-aged children, including public preschools and family child care centers. 60.3% of Massachusetts' preschool age children are in preschool, slightly lower than the percentage of children attending kindergarten (83.0%). In 2011, Massachusetts won one of the nine awards offered by the Obama Administration's Early Learning Challenge (ELC) competition. The state received an estimated $50 million over a four year period to funnel towards the education system and potentially increase its established grant program funds (Massachusetts Dept. of Early Education and Care, 2012).

Lowest Percentage of Students Served at a High Cost

From our data collection, we found 23 states implement a "grant" style model of preschool funding. This program is the most-widely implemented preschool system design currently incorporated by state governments. In certain cases, the state allots a sum of money to localities or schools based purely on economic standing; in other states we see a competitive application as described above. Regardless, the states spend, on average, the second highest amount to run a grant program at $4,737.61, falling behind a voucher program's costs by $233.39 per child. This

is slightly higher than the average costs-per-child of all current state models, roughly $4,489.28. We determined that to offer grant funded preschool services to 50% of an average state's four-year-old population would cost $213 million, the second highest total cost, after universal, and above the $206 million average.

Grant programs only serve 16.72% of state's four-year-old population, the lowest coverage of all state models, perhaps because of the wide range of states with a grant program in place. This could also be due to the competitive nature of most programs, which specifically cater to academic institutions that demonstrate the most potential for high results. In a sense, this low proportionality of students covered can be addressed by a socio-economic barrier that current competitive grant programs tend to exacerbate. Alternatively, we note that competitive grant programs are the most-widely spread net of preschool programs and are fairly new to many states; the low student coverage could be traced to the fact that many states are just beginning to implement these grant programs and had not established a steady foundation at the time of data collection. The maximum amount of students served by a grant program is 58.2%, a record high currently held by West Virginia preschool systems (NIEER, 2011). The low percentage of children served is aligned with the highest total spending per child of all programs. Grant programs allot $5639.22 per child, including state spending, Head Start funds, and extraneous forms of support outside of the government's dollar, compared to the U.S. average total per-child spending of $5518.20. See Appendix B for state expenditures and percent of four-year-olds served.

Grant programs were on par with the average of all state systems, earning a 7.3 from NIEER's 2011 benchmark for quality standards. Grants fell second to the voucher system, but were rated well above expanded elementary programs. The downside is that certain states, such as Ohio, offset higher scores from grant programs by receiving a score of 2 in their standards review, a common occurrence in expanded elementary programs as well. Grant systems essentially met the average for other support factors, including student-to-staff ratio, teacher education standards, and meal offerings.

Grants: Creating Dependency?

While these expectations vary across states, this option requires that states target their grants toward programs that support low-income families. This style of funding will help build the early education infrastructure from the ground up, with the best programs succeeding and existing as examples to other programs that seek to open. However, such constraints on the new preschools' customer bases might stifle their initial profitability and render them dependent on grant-making bodies. For this reason, it may make sense to remove the low-income requirement

from development grants, and instead use them to spur the growth of preschool-provision infrastructure, rather than income-specific program development, though this would lower the grant program's targeting ability.

Option 3: Voucher Program to Needy Families

Norway's Trailblazing Program

Unlike the first two options, which focus on program development, either through top-down expansion or seed funding, option three targets low-income families themselves and attempts to directly ease the burden of attending preschool. Through a voucher program, states would disburse vouchers to families below a designated income threshold, 200% of the federal poverty level, allowing them to attend existing for-profit preschools. This program resembles the low-income preschool support system used in Norway, to great effect, which gives parents both flexibility and an incentive to research and make an informed decision. Norway's system gave vouchers to families in need, with a cap on the amount that each family could spend on child care. The present system is universal; the government gives vouchers to families from all backgrounds, not just special needs. There are very few private schools in Norway, so most vouchers go towards public or non-profit preschool and/or child care (Havnes & Mogstad, 2009). Our program will specifically target low-income children, to level the playing field with those children who can afford to attend existing private preschools. Our program could expand with more resources to become a universal program similar to Norway's, but we will focus on a targeted program for this analysis.

Currently there are four states that we believe have voucher programs in place: Arkansas, Delaware, Kentucky, and Louisiana, and no program is specifically implemented in the way our option suggests. As a result, we have a very small data set with which to make assumptions about voucher programs. These four states all have unique and potentially overlapping characteristics that may skew our statistics and results.

Options, Flexibility, and Outcomes

A voucher program will allow families to decide for themselves which programs best suit their needs, rather than mandating support services that families may or may not need. They also exact no direct cost in infrastructure development, unlike option one which would place a huge burden on local governments. The vouchers will have to be introduced gradually as thousands of new families flooding into the preschool system would certainly disrupt education quality and overwhelm providers. If implemented over time, an expected increase in preschool attendance

will likely spur an increase in private preschool providers and a push for high quality. This style of intervention allows the government to augment the buying power of these lower-income families, tilting the development of the preschool market to meet their needs. The voucher program allows the low-income families to precisely direct the allocation of state funds for developing programs, using market forces to foster a statewide preschool system that is sensitive to the needs of the poorest families, and creates a competitive, and thus lower cost, higher quality system. Using the four existing programs, we estimate that providing a voucher program for 50% of four-year-olds would cost $94.6 million, significantly less than the previous two options. Unfortunately, with such a small sample size, it is difficult to project costs with certainty. Funding per child, however, was relatively high, at $4,971 of state funds, and $6,601.75 in total. Despite these higher estimates, we believe that increased competition between currently existing programs and new programs that will enter the market will drive down costs per child. This program also avoids the high costs of state funded infrastructure development by subsidizing the use of existing programs and facilities.

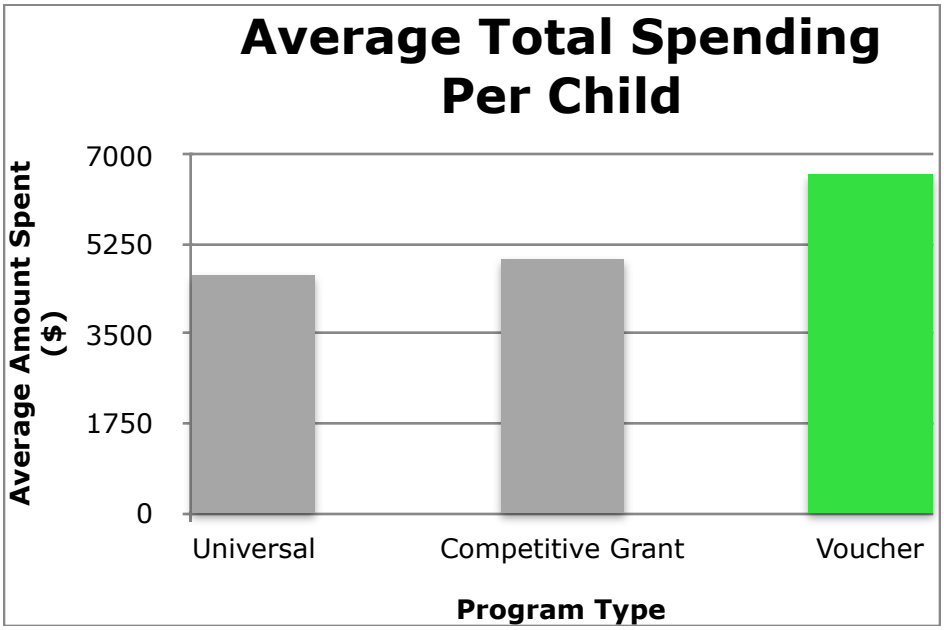

Figure 4. Total Expenditures per Child Based on Program Type

In addition to saving the state infrastructure development costs and effectively targeting the lower-income population, this program has the added benefit of fostering educational diversity. Under the grant and expanded elementary programs, there remains a distinct possibility that the programs that emerge will by default, segregate by socioeconomic class. The development funds or grants would go to programs in low-income areas that are struggling to support themselves, and an expanded elementary program may cause middle- or high-income families to send their children to pre-existing, private preschools if quality falls. By specifically targeting and placing

low-income children in amongst their higher-income peers, we expose them to the same education quality, while giving children the chance to interact across class lines. Children have little interest in the arbitrary distinctions that adult society may impose upon them, and bringing children of different income groups together at a young age demystifies the other and helps foster friendship and empathy.

On average, states with voucher systems served about 29% of their population, slightly greater than the U.S. total percent served of 28%. While not as high as the expanded elementary option, the voucher option more effectively targets low-income and at-risk children, so there is no need to have almost 50% participation in a state program. The program would still encourage preschool attendance, not through a state provided public preschool system, but through the existing system of providers. Higher income families will continue to send their children to preschool, and vouchers give low-income families the ability to enter the market as well. This incentivizes the private preschool market to expand, so the overall universality of the voucher program will be great even if the proportion of children served by the program seems low. The voucher program is also a good targeter of low-income and at-risk children and families, who must apply and qualify for vouchers under specific at-risk statuses and income levels.

Because of the competition induced by giving families vouchers and allowing them to choose the best program, a voucher program will also have high quality standards, program structure, and family support. We found that voucher programs currently in existence got the highest average NIEER rating, 8.75 compared to a U.S. average of 7.31, proving this theory. The voucher program also received the highest family support rating of 1, compared to a U.S. state average of .64. In terms of education outcomes, costs, and accessibility, the voucher program demonstrates great potential for success.

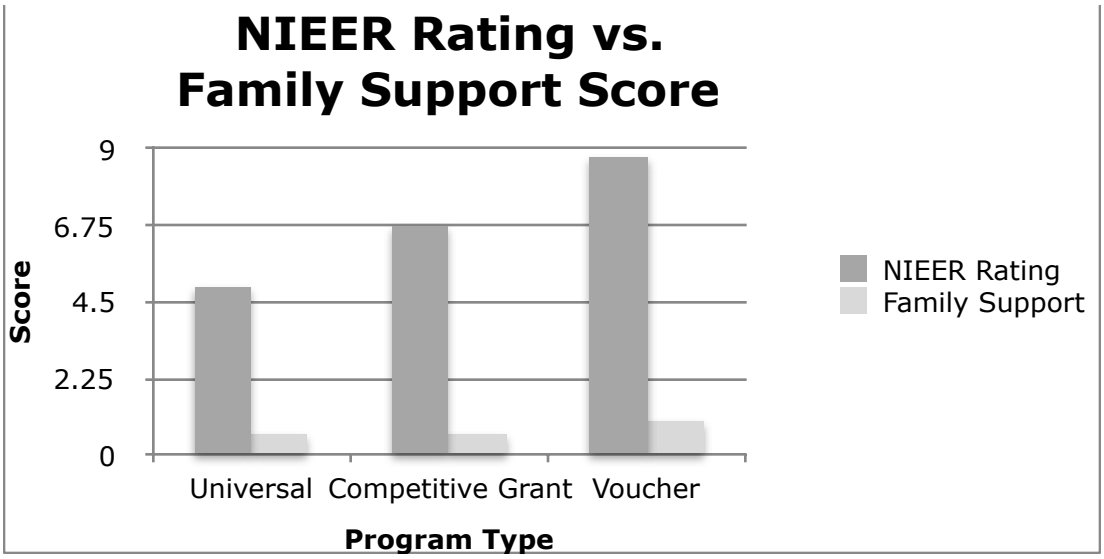

Figure 5. State NIEER Rating and Family Support Score by Program Type

Option 4: Sliding Co-Pay Based on Financial Need and At-Risk Status

Day Care Model

This option calls for charging tuition for publicly provided preschools, but subsidizing tuition payments for low-income families on a sliding scale. For example, a family that makes less than 100% the federal poverty level might pay nothing, a family that makes 200% of the federal poverty level might pay 50% of tuition costs, and a family making over 300% might pay full price. Since these public preschools will also serve families that do not meet income requirements for aid, the revenue from their tuition will help support the program. This places some of the costs of attending preschool on the people using the schools, offsetting the costs to the taxpayer that previous options would have levied. It also offers the same family-support structure as the voucher system from option three, affording families greater autonomy and helping them direct state development dollars more effectively. When families pay some of the cost for preschool, it offsets development costs for a public system and encourages parental investment in their children's education. Having low-income families pay for some portion of tuition may deter some participation, but the scale can adjust to balance low-income participation with cost dispersion. Such a program demands that parents invest in their children's education early on, engendering a life-long attitude that will benefit families.

This type of preschool program has not been widely seen in any states thus far, but has been implemented in day care programs. While Arkansas uses a sliding-scale payment scheme to provide some services, only families between 200% and 250% of the federal poverty level

participate in this regime, making it insignificant for our analysis purposes. (Arkansas Division of Child Care and Early Education, 2009). Several states, such as Wisconsin, Tennessee, and Washington all have a sliding scale co-pay based on family income (Wisconsin Dept. of Children & Families, 2011). The federal day care program, Child Care and Development Fund (CCDF) also runs on a sliding scale co-pay structure, where states receive block grants to distribute as they see fit through a sliding scale co-pay system. Eligible families are low-income and qualify for Temporary Assistance for Needy Families (TANF) (US Dept. of Health and Human Services, n.d.). While these programs are strictly for child care, be believe such a structure can easily be transferred to a preschool program with equal success. A sliding scale preschool program could even substitute for child care, decreasing the amount states spend on subsidizing child care in favor of greater preschool spending.

A Unique Integration

This option relies on the development of more public preschools to meet the needs of all of the children not yet enrolled in preschool. The sliding-scale co-pay will most likely succeed if non-eligible families take part in the program in high numbers as well as low-income families. This adds diversity in the student body and attracts revenue to support the program. The President has proposed a similar payment scheme to expand access to preschools for low-income families. This option may be more efficient than other options because it will distribute costs more toward the families actually using the service rather than all taxpayers, while keeping the program affordable for those most in need. However, it will initially only be feasible in states with a sizeable preschool infrastructure program in place, and may be difficult to implement if no public preschool system yet exists. Because there are no examples of states with such a program in place already, we cannot estimate a rough cost. However for two states with average sized population, CCDF in Indiana spent $81.7 in the 2013 fiscal year, and both state and federal CCDF funding in Virginia totaled $183.4 million in 2012 (Virginia Dept. of Social Services, 2013). Using these average costs of a child care program, while not a preschool program, we can still see that the sliding scale option would not be a very expensive program, certainly less so than some of our other options.

Like expanded elementary education, a sliding scale option calls for developing public preschools, so we anticipate similar test scores to the outcomes of option one. Given the nature of the program and its sliding scale of eligibility for government assistance for low-income and at-risk families and children, this option will successfully target children most in need of preschool education and services. Even though not all families are eligible for subsidies, admission is non-discriminating so the program could quickly approach universal status. However, there is a risk that such public preschools will be seen as lower quality and not attract

as much patronage from middle class families who do not qualify for government assistance and are unwilling to pay the full cost of the program. This may divert potential users to private or other non-profit preschools currently in place instead of this government sponsored option. This would jeopardize the funding stream of the program and could result in a decrease in competition between public and private preschools, lowering quality standards and quantity of students.

Like the expanded elementary education option, the sliding scale program calls for publicly funded preschools. Unlike the expanded elementary option, this program charges tuition from those families who can afford it, using their contribution to offset the cost of subsidizing family support services. Families who send their children to public preschool without subsidy support would pay the market price for family support resources, helping cover the costs for families that most need these services. This mitigates the potential system overload posed by expanded elementary education, which would sacrifice quality in the name of expanding availability. A sliding scale program would also limit crowding-out of private preschool providers, so competition would still occur, driving improvements in quality of family support and program structure.

Outcomes

The following are the scores for each of the four options based on the six criteria we discussed earlier, with 1 as the lowest score and 5 the highest:

Criteria	Option 1- Expanded Elementary Ed	Option 2-Grant	Option 3- Voucher	Option 4- Sliding Scale
Cost (25%)	3	2	5	4
Test Scores (15%)	3	4	4	3
Targeting (25%)	4	2	5	5
Universal (15%)	5	3	4	4
Family Support (10%)	3	4	5	4
Program Structure (10%)	3	5	5	4
Average Score	**3.55**	**2.85**	**4.7***	**4.1**

Sensitivity Analysis

The ranks in the matrix above come from evaluating states whose existing programs resemble those we prescribe in our options. We identified features in these state programs that aligned with our different program types. State programs were deemed expanded elementary education if they had programs that availed themselves to the whole public, were taxpayer-funded, and minimized barriers to entry. States that used competitive grant programs to disburse preschool funds were used to evaluate option two. Only four states used voucher programs to finance lower-income families, so our data for option three were limited. We only had 50 states to investigate, which broke down further into these four groups, so at any point our sample sizes

were too small to yield statistically significant relationships. Most of our regressions yielded enormous p-values that made the regression coefficients difficult to use. We were able to glean some information from correlation tests and found relationships between each of our programs and our evaluative metrics, but these correlations should not be confused with causal relationships.

One of our major metrics for evaluating program effectiveness was fourth grade test scores. The NAEP reports reading and math test scores for fourth and eighth grade students for each state, in order to compare effectiveness of different state programs. Since test scores are not tied to preschool attendance rates, the value of this data is limited, and we cannot confidently determine causality. The relationships that we found were not statistically significant, although we did see slight positive associations between reading scores and the presence of preschool programs. We faced similar problems when using high school graduation rates as a metric for program success, since again these data did not include information on preschool participation rates. We tried to correct for this by only evaluating programs that had opened before 1998, before the current cohort of high school graduates would have attended preschool. We found very little difference between graduation rates for states whose programs predated 1998 and states where this was not the case (79.7% versus 77.5%).

To account for this potential weakness in our study, we reevaluated our criteria holding every state's test scores constant (see appendix A). Despite this dramatic change, the relative scores of the options remained consistent, with vouchers by far the most effective. Better evaluation of preschool effectiveness necessitates a longitudinal study like the HighScope Perry Preschool study mentioned earlier. Such a study could, instead of simply dividing students into "preschool" and "no preschool" cohorts, group students into different types of programs and evaluate effectiveness over time. This would allow us to introduce more variables, such as crime rates and psychological health, as well as more cleanly identifying control and experimental cohorts.

Our metrics for family support largely came from the NIEER yearbook, which set our expectations for the kind of support families could receive. Our scores for family support indicate how conducive each program is to providing these services. Options one and four could mandate these services, and option two could make them part of grant qualifications. Option three would allow families to select programs that offered the services they need. The scores we gave for this section were mainly speculating on the potential of each option to incorporate these services, and leaves much latitude for states to fall short or exceed expectations.

No state currently uses a sliding-scale model to make preschool accessible on a widespread basis, so we were forced to conjecture based on the voucher programs and programs with similar payment structures, such as Virginia's Child Care Development Fund (CCDF). Our research on this program and the Indiana CCDF led us to conclude that the costs of this type of program are well contained, since those that participate and pay full tuition offset the costs of subsidizing low-income families. However, the cost-effectiveness of option four depends heavily upon the level of preschool infrastructure already established in the state. States with robust preschool programs already in place can afford to expand existing programs, charge tuition, and subsidize the tuition of low-income students. Since most of our data come from states that use sliding scales in conjunction with established infrastructure, our matrix does less to predict the effectiveness if a state has to build a preschool program from the ground-up, relying on tuition and subsidies to make it affordable and accessible for all.

Recommendation

The Voucher

Given our evaluative criteria, vouchers for low-income families represent the most effective option. This program expands access to existing private preschools, targeting low-income families by exclusively including them in the subsidy program. Since these preschool programs are already in place, implementation will be less costly than attempting to expand public school infrastructure or invest in developing new private programs. This program runs the risk of overburdening existing programs by flooding them with new students, but early announcement and gradual implementation will help these schools respond more smoothly and expand program capacity. The vouchers will efficiently allocate development funds toward local programs, as families choose to spend their vouchers at the programs that best meet their needs. This makes vouchers strong on program structure and family support, which will improve to meet the increased competition fostered by vouchers. Finally, because vouchers are simple, streamlined, and relatively inexpensive, a voucher program has greater political feasibility than a program like expanded elementary education that requires major infrastructure expansion and government intervention. Critics of voucher systems claim that providing vouchers to students will indirectly harm public education. This program will only apply to preschool education which will expand access to a service which in most states is not publicly provided.

Vouchers afford low-income families greater market clout by empowering them to choose programs that best suit their needs. Through vouchers, families direct education development

dollars on behalf of the state, targeting programs that provide the services that make preschool a supportive community institution. This advantages the programs with the best services, giving them a competitive edge and helping them expand to serve more students. As the voucher program expands to encompass more families, new preschools will open to take advantage of this growing market. As more programs open, the state will continue to invest in program development, with funds guided by the needs of the families that stand to gain the most from preschool education. Ultimately, a voucher program could extend to families with ever-higher incomes, allowing the state to subsidize preschool education for much of its population without ever having to invest taxpayer dollars directly in developing preschool infrastructure. Success in financing public services through vouchers may lead states to investigate other services that might improve through voucher systems.

In their study of the Georgia Pre-K program, Levin and Schwartz (2007) propose a voucher program that directly distributes vouchers to families falling under the designated percent of the federal poverty level, as opposed to reimbursing schools for each of these families admitted. Direct distribution to families puts decisions in the hands of the parents, giving more autonomy to the individual in determining the educational fate of their child. By offering vouchers that offer families greater control over their decision, Levin and Schwartz predict that families will become more engaged in their child's educational path and will provide encouragement and direction following preschool.

Implementation and Potential Roadblocks

A voucher program would help families improve their child's education by choosing private or public schools with the finest quality programs and services. Systemic competition from the voucher program would push schools to increase their standards, guided by consumer preference instead of more arbitrary government action. The voucher program itself could be swiftly implemented without much political resistance, except for low-income families that fall just near the cutoff for financial support. Families in this grey area, between 200% of the federal poverty level and a more comfortable status, would face the burden of attending preschool without government support. Each state must choose the appropriate income level to receive subsidized preschool, basing their decision on their unique demographic conditions.

By expanding the buying power of individual families, but only to consume certain long-term beneficial goods, like education, the state can change consumption patterns. This directly benefits families that receive vouchers, by empowering their children to succeed in future educational endeavors. It also indirectly benefits all other members of the state economy, because a more educated public tends to be a more productive, more informed public, wherein

markets function more efficiently. The voucher program has the additional benefit of integrating students across socioeconomic lines. If parents can use their vouchers to send their children to private preschools, the student bodies of these schools will become an amalgamation of students whose parents can afford preschool and those who cannot. This sort of integration will benefit all participating children, by demystifying class barriers and developing empathy at an early age. Children will learn about one another, and in learning, can identify common values and interests. This sort of empathy development and learning from others with different backgrounds has always been one of the great strengths of public education, and will have potent effects when children are too young to have been socialized thoroughly into class distinctions. Part of public education in America has always been the discovery that you are a member of a wider community, to which you have obligations and from which you receive great benefits. The voucher program uses market principles to introduce more children into that system, and gives them all the tools to succeed together in the new American century.

APPENDIX A

Alternative Evaluation Matrices:

I. This matrix negates the variable “test scores” by giving each program a zero. Considering our apprehensions regarding the value of test scores in this case, we wanted to evaluate the programs weighted without this specific variable.

Criteria	Expanded Elementary Education	Competitive Grant	Voucher	Sliding Scale
Cost (25%)	3	2	5	4
Test Scores (15%)	0	0	0	0
Targeting (25%)	4	2	5	5
Universal (15%)	5	3	4	4
Family Support (10%)	3	4	5	4
Program Structure (10%)	3	5	5	4
Average Total	3.1	2.16	**4.1***	3.65

APPENDIX A (cont'd)

II. Similar to the previous matrix, we again eliminated the variable test scores. This time, we also equalized the weights for "universal," "family support," and "program structure" while keeping "cost" and "targeting" constant.

Criteria	Expanded Elementary Education	Competitive Grant	Voucher	Sliding Scale
Cost (25%)	3	2	5	4
Targeting (25%)	4	2	5	5
Universal (16.7%)	5	3	4	4
Family Support (16.7%)	3	4	5	4
Program Structure (16.7%)	3	5	5	4
Average Total	3.59	3	**4.84***	4.26

We see from both the matrix recalculations above that the voucher program soars in scale amongst its competitors, bolstering our recommendation.

APPENDIX B

Grant State	State Spending Per Child ($)	Percentage Served
Alabama	4544	3.2
Alaska	6855	1.2
California	4986	14.4
Colorado	2044	13.6
Connecticut	9356	10.2
Illinois	3449	24.6
Iowa	3268	26.5
Maine	1985	13.5
Massachusetts	3691	9.4
Michigan	4453	9
Minnesota	7475	1.2
Missouri	3085	2.7
Nebraska	1607	18
Nevada	2468	1.7
New Mexico	3561	7.3
North Carolina	5166	12
Ohio	3942	2.4
Oregon	8454	7.7
Pennsylvania	6827	16
Rhode Island	5556	1
Virginia	3808	15.5
Washington	6780	7.7
West Virginia	5605	58.2

APPENDIX C

Program Type	State Examples	States Not Providing Preschool Programs

Universal (12)	• Florida • Georgia • Kansas • Maryland • New Jersey • New York • Oklahoma • South Carolina • Tennessee • Texas • Vermont • Wisconsin	• Arizona • Hawaii • Idaho • Indiana • Mississippi • Montana • New Hampshire • South Dakota • Utah
Competitive **Grant (23)**	• Alabama • Alaska • California • Colorado • Connecticut • Illinois • Iowa • Main • Massachusetts • Michigan • Minnesota • Missouri • Nebraska • Nevada • New Medico • North Carolina • Ohio • Oregon • Pennsylvania • Rhode Island • Virginia • Washington • West Virginia	
Voucher (4)	• Arkansas • Delaware • Kentucky • Louisiana	
Sliding Scale (0)	*none currently functioning*	

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