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# Universal Preschool: Much to Gain but Who Will Pay?

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**Abstract**

Experts tell us that 4-year-olds have much to gain from a stimulating and nurturing preschool experience, and mounting evidence suggests that these benefits accrue to society on a much larger scale as well. Although numerous proposals acknowledge the benefits of and need for improved early childhood education, few contain specific recommendations for how to go about financing a major expansion. This paper explores ways to finance a preschool program that would be universally available to all 4-year-olds in the country, a program that would be of at least moderate quality (and in many places of high quality). We review existing programs in the United States and abroad, as well as a variety of proposals for expanding preschool for 4-year-olds in this country, before turning to our own proposed expansion. We base our proposal on ability-to-pay as reflected in the existing tax system, and focus on parents as the main financial contributors, with additional funds transferred from existing state and federal programs that subsidize child care for this age group.

**Universal Preschool: Much to Gain but Who Will Pay?**

Among experts in child development and early education, there seems to be increasing agreement that 3- and 4-year-olds gain from being in a stimulating environment with other children. This paper begins with the assumption that this premise is correct and that children across the full spectrum of family income, family composition, and prior experience with child care would gain from being in a well-implemented preschool at ages 3 and 4.[1] Our focus is on finding a feasible way to finance universal preschool. As such, our target is the financing of universal preschool for children of age 4.[2] If successful, such a plan could eventually be extended to 3-year-olds.

We begin with a brief discussion of the relationship between preschool, preschool quality, and developmental outcomes. We then provide background on the current situation in the United States, followed by a detailed consideration of state-financed prekindergarten programs (Pre-K). We follow by describing early childhood education (ECE) programs in other industrialized countries. We then focus on possible financing approaches, first focusing on a variety of proposals designed to improve access to and quality of ECE in the United States. Finally, we present our proposal for financing universal preschool for 4-year-olds in the United States.

## I. ECE QUALITY AND DEVELOPMENTAL OUTCOMES

There is a growing body of evidence that preschool can lead to both short- and long-term gains. First, the years from birth to 5 are increasingly viewed as a critical period for establishing the foundations of thinking, behaving, and emotional security. For example, in *From Neurons to Neighborhoods*, a National Academy of Science volume (Shonkoff and Phillips, 2000), a large research literature is cited

[1]See, for example, Blau (2001), Karoly et al. (1998), NICHD Early Child Care Research Network (2000 and 2002), and Peisner-Feinberg and Burchinal (1997).

[2]We do not suggest that 3-year-olds (and even younger children) would not benefit from such a program, but rather focus on providing an expanded early education program for 4-year-olds as a first step in an improved system of early education that might later be expanded to serve children of other ages.

which shows that during these years, linguistic, cognitive, social, emotional, and regulatory skills are developed which predict children's later functioning in many domains.

The largest scale and perhaps most convincing study in terms of the potential gains from prekindergarten is based on evaluation of the Chicago Child-Parent Center (CPC) Program, a multisite intervention operating in the Chicago public schools.[3] Evidence from this intervention indicates that participation in prekindergarten at ages 3 or 4 is associated with significantly higher rates of school completion by age 20, with lower rates of official juvenile arrests, violent arrests, and multiple arrests by age 18, and with lower rates of special education services and grade retention.

In a recent study, Reynolds et al. (2002) conducted a benefit-cost analysis on the Chicago-Parent Center program. They estimate the present value of program benefits for: "(1) reductions in expenditures for school remedial services, including special education and additional schooling required for retained students, (2) reductions in criminal justice system expenditures for both juvenile and adult arrest and treatment, (3) reductions in child welfare system expenditures, (4) averted tangible expenditures to crime victims as a result of lower rates of arrest and to victims of child maltreatment, and (5) increases in projected earnings of program participants and tax revenues as a result of higher rates of high school completion." They find that "participants had an 11-point lower rate of special education placement (40 percent reduction), a 12-point lower rate of grade retention (40 percent reduction), an 8.2-point lower rate of juvenile arrest (33 percent reduction), and an 11-point higher rate of high school completion by January 2000." The authors report that the CPC preschool program generated a return to society of $47,759 per participant by age 21. Of this, nearly $26,000 constituted benefits to the general public

[3]The Chicago Longitudinal Study investigates the life-course development of 1,539 children from low-income families; 93 percent are black and 7 percent are Hispanic. Born in 1980, children in this ongoing study attended kindergarten programs in 25 sites in 1985–86. The original sample included the entire cohort of 989 children who completed preschool and kindergarten in all 20 Child-Parent Centers with combined programs and 550 low-income children who did not attend the program in preschool.

(taxpayers and crime victims) per participant. The average cost of the program per participant was under $7,000, so that benefits far exceeded costs.

Reports from well-known but small experimental programs such as the Perry Preschool Project (see below for more on this) and the North Carolina Abecedarian Project had earlier provided some evidence that enriched programs for low-income children had long-term gains to the child, family, and society at large. The results are qualitatively similar to those of the CPC program.

Another major study by the National Institute of Child Health and Human Development (NICHD) Research Network, sought to evaluate the impact of child care quality on child functioning. Child care quality was measured by observing how and when caregivers interacted with study children. The quality of children's experiences with child care staff was found to be an important influence on children's language, preacademic, and social competence, but the family was still the most important determinant of young children's development.

A comprehensive study conducted at the RAND Corporation (Karoly et al.,1998) finds that preschool programs such as the Perry Preschool Project easily passed a benefit-cost analysis. The researchers studied programs that use an experimental design with at least some attempt to randomly assign children to treatment and control groups, that involve a minimum of 50 children, and for which there is some follow-up analysis past the period of direct intervention. They looked at evidence for gains in terms of cognition; educational achievement including probability of high school graduation; grade retention and use of special education; and a broader concept of economic outcomes such as arrest rate, employment rate, welfare use, and earnings. The Perry Preschool Project is the only pre-K program for which there was sufficient information to conduct the full benefit-cost analysis (an infant program in Elmira, New York, was also fully evaluated). The program provided a one- or two-year preschool curriculum and program to a group of low-income children with low IQs at age 3. The researchers estimate that the full cost of the program was a little more than $12,000 per participant, and provided

benefits of $25,000 from a societal perspective and nearly $14,000 to program participants over 20 years in 1996 net present value terms.

Finally, in a recent study Garces, Thomas, and Currie (2000) address the question of gains from Head Start. Rather than using a study based on participation in a particular program, they use data from a national panel survey—the Michigan Panel Study of Income Dynamics (PSID). They employ four indicators of economic and social success in adulthood and report that for whites, participation in Head Start is associated with a significantly increased probability of completing high school and attending college as well as elevated earnings in one's early twenties. For African Americans they find that those who participated in Head Start are less likely to have been convicted or charged with a crime. The authors also report some evidence of an increased likelihood of African American males completing high school.

Thus the bulk of recent evidence provides support for long-term gains from pre-K, especially for children in low-income families. All of these studies suffer from potential selection bias in terms of which children attended preschool. Also, many of the studies are small-scale, and there is some question as to whether the results are generalizable. Even so, the evidence seems strongly consistent with gains from a high-quality, structured pre-K program. These gains include an increase in the probability of school readiness, higher school achievement, reduced grade retention, reduced use of special education, lower crime among adolescents, lower rates of teen pregnancy, and better performance in the labor market as young adults.

These gains accrue to the individuals in the programs, to their families, their classmates, school mates and the rest of society. The evidence of gains, however, seems to be strongest, and most studied, among children born to economically disadvantaged families, who are at risk of poor educational outcomes.

## II. THE CURRENT PICTURE OF 4-YEAR-OLD AND PRESCHOOL EDUCATION IN THE UNITED STATES

### Numbers in Child Care or Preschool

Using United States census data, the National Center for Education Statistics (2002) estimates that 65 percent of the 3,940,000 U.S. 4-year-olds were enrolled in preprimary programs in 2000. This percentage is down from 69 percent in the previous year, but up from 60.3 percent in 1994.[4] Thus, approximately two-thirds of all 4-year-olds are already in some type of preschool or child care program.

### Head Start

The largest national public preschool program for 4-year-olds is Head Start, which has provided early education to millions of children since it began in 1965.[5] States and localities most often offer programs that run part-day for the duration of the regular school year, though a number of states provide funds to extend Head Start services to include full-day, full-year programs (Finance Project, 2000). Head Start program rules require that 90 percent of the children enrolled be from families that participate in TANF or have income below the poverty line, limiting the ability of Head Start funds to serve larger populations.

Total federal funding for Head Start was $6.0 billion in FY 2001; states contributed an additional $200 million (National Center for Children in Poverty, 2000). In FY 2000, the program served 857,664 children, including about 480,300 4-year-olds.[6] These constituted 54 percent of all participating children

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[4]This statistic is based on the question of whether children attended a "nursery, kindergarten, elementary, or secondary school" and, depending on the parent's or proxy's interpretation, may include child care centers. In a similar report, the National Center for Education Statistics (2000) used data from the National Household Education Survey and defined preprimary care as including kindergarten, Head Start, nursery school, prekindergarten, day care centers, and preschools. They found a similar proportion of 4-year-olds in such programs—70.1 percent in 1999.

[5]Although Head Start implementation, and hence program educational content, varies, we refer to it as an early education program rather than a child care program in accordance with the program's early education and development-based goals.

[6]This is about 60 percent of eligible 3- and 4-year-old children, according to estimates by The Children's Defense Fund (2001), and at least 50 percent according to E. Zigler (personal communication, May 2002.).

and slightly more than 12 percent of all 4-year-olds (U.S. Department of Health and Human Services, 2002). If we uniformly distribute program expenditures, this suggests that $3.3 billion were spent to provide child care and education to this group under Head Start.

Other Major Programs That Subsidize Preschool and Child Care for 4-Year-Olds

*Child Care and Development Fund (CCDF)*

The Child Care and Development Fund, authorized under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, provides child care assistance to families who are receiving TANF aid or are moving off of public assistance, and to other low-income working families.

The CCDF provides funds to states, which must then meet federal program requirements for program content and state financial contributions. Funds for CCDF are based on three streams. First, states receive a share of the discretionary funds appropriated to the CCDF through the annual congressional budget process. Second, states also receive entitlement funding, or mandatory funds which are based on the funding levels that they received under the child care programs provided in conjunction with AFDC.[7] Third, states can receive a portion of remaining federal funds if they meet maintenance of effort requirements.[8] States may also transfer up to 30 percent of their TANF block grant to the CCDF program.

Federal law requires that recipients of subsidies under CCDF have income below 85 percent of state median income.[9] In practice, the maximum income threshold varies substantially across states, from $16,000 for a family of three in Wyoming to $39,000 for a family of similar size in Connecticut. States

[7]The exact amount of funds states receive is tied to the amount they received in FY 1994, FY 1995, or the average of 1992 to 1994, whichever is greatest. No state match is necessary in order to receive these funds.

[8]Maintenance of effort provisions require states to spend all of their CCDF entitlement funds and 100 percent of the level of state expenditures on the AFDC programs in 1994 or 1995, whichever is greater. To meet matching requirements, states must match federal expenditures at their 1995 Medicaid matching rate.

[9]In 1999, only nine states set allowable income at the 85 percent SMI maximum (DHHS, 2000).

generally cannot use CCDF funds for construction of new facilities. In addition to meeting state income requirements, eligible children must also be younger than 13, have parents who are working or in a training program, or be in need of child protective services.

In FY 2000, CCDF provided both $5.1 billion in federal funding and an additional $1.9 billion in state matching and maintenance of effort spending, including transfers from TANF to CCDF (DHHS, 2002). States also spent approximately $1.0 billion on child care services directly provided under TANF (DHHS, 2002). In FY 1999, 13 percent of children (229,000) served under CCDF were 4-year-olds (DHHS, 2001); again assuming a uniform distribution of expenditures among age groups and assuming the distribution of children by ages remained similar in FY1999 and FY2000, this implies that in FY 2000 approximately $1.0 billion was spent under CCDF for child care of 4-year-olds.

Given the above enrollment, and assuming no overlap with 4-year-olds in Head Start, CCDF serves about 6 percent of all 4-year-olds; Head Start and CCDF together serve about 18 percent of all 4-year-olds.[10]

*Title I of the Elementary and Secondary Education Act (ESEA)*

Under Title I of ESEA, states make decisions about distribution, and may distribute a portion of federal funds to preschools that meet Head Start performance standards. School districts or local schools may choose to use some portion of these funds to serve preschool children. Title I grants are determined using a formula that includes a number of factors such as the average per-pupil expenditure in the state, the child poverty rate, and past distributions to the state and to the district. The Department of Education reports that approximately 90 percent of school districts receive grants.

[10]Since the CCDF data are a monthly average number of children served rather than ever enrolled during the year, this may underestimate the children actually served. But there is likely to be overlap between those covered by Head Start and those receiving CCDF funds, which would mean that our approach overstates the number of 4-year-olds served.

The U.S. General Accounting Office (2000) estimates that in school year 1999–2000, 17 percent of school districts that received Title I funds used them to provide or augment preschool programs, but these districts used less than 10 percent of their total grant for these purposes.[11] In total, states spent approximately $407 million in Title I funding on preschool in 1999–2000; large districts (40,000 or more students) were four times as likely to provide Title I funding to preschoolers than were small districts. Overall, 8 percent of children entering preschool received some funding from Title I. Almost all children served by Title I grants for preschoolers were between the ages of 3 and 5; over 90 percent of districts set a minimum age of 3 or 4 (GAO, 2000). Because preschool most commonly serves 4-year-olds, we make the conservative assumption that 50 percent of Title I funds, or $203.5 million, went to 4-year-olds.

*Federal and State Tax Policy*

Two elements of the federal tax code, the Dependent Care Tax Credit and Dependent Care Assistance Program, assist families, but their usefulness is greatest for middle- and upper-income families since they provide relief primarily for those with positive income tax liability.[12] The Dependent Care Tax Credit provides a maximum credit of $1,440 for employment-related child care; 22 states provide similar credits, ranging from $25 (Louisiana) to $1,584 (New York). The Dependent Care Assistance Program allows employers that provide child care to exclude these benefits from federal income, FICA, and unemployment taxes, up to $5,000 per employee. Annual forgone federal revenue resulting from these two tax incentives was approximately $3.7 billion in 2001 (Joint Committee on Taxation, 2002). By applying the same proportion of total CCDF program expenditures dedicated to 4-year-olds to the tax credits, which target a similar group of children, we estimate that as applied to 4-year-olds these policies represent approximately $0.5 billion in forgone revenue.

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[11]The estimates are based on a GAO survey of 16,000 school districts nationwide.

[12]It begins to benefit a single working mother with two children when her earnings surpass $10,000 (in 2001 dollars) for earnings above $10,000, the family receives a credit equal to 10 percent of family income up to a maximum of $600 per child. Over time this is scheduled to increase to a maximum refundable credit of $1,000.

States use a variety of tax mechanisms to fund their prekindergarten programs, which we describe below. Many make allocations to early childhood education (ECE) directly from the pool of general revenues. Some states and localities use tax instruments designed to raise revenue for child care (Mitchell, Stoney, and Dichter, 2001). Florida law, for example, allows the creation of special taxing districts and grants them power to increase property taxes to meet special needs. Several districts that target children's services exist and dedicate a portion of new property tax revenues to ECE and child care. This builds on property taxes as the major source for K–12 public school funding in the state. Although states receive a sizable amount of revenue from sales taxes, only a few localities, most notably Aspen, Colorado, dedicate a portion of sales tax revenue to child care or ECE. Colorado is also the only state to have a voluntary child care checkoff on its income-tax forms. In addition, a few states use excise taxes to fund child care and ECE programs. Both California and Indiana, for example, have raised the tax on tobacco products and earmarked increased revenues for ECE.

A current proposal in Seattle, Washington, would create a ten-cent excise tax on espresso beverages, the proceeds from which would be used to provide subsidies to low- and middle-income parents in need of assistance with child care payments, increase the quality of child care in the city, and boost the wages of child care workers. The Early Learning and Care Committee estimates that the tax would raise $7 million to $10 million annually (Mitchell, 2002).

States also generate revenue from fees and several states allow residents to dedicate a portion of their vehicle registration fee to broadly defined programs for children or to purchase special license plates from which a portion of the price is donated to programs that target children. Thirteen states use proceeds from state lotteries to fund education, and two states, Georgia and Missouri, use lottery funds to support a prekindergarten program. As we discuss later in the context of Georgia's Universal Prekindergarten program, lotteries have a potentially large revenue-generating capacity.

In total, states spend approximately $1.9 billion on their separate state-financed programs (Education Week, 2002). Since some of these programs target children older or younger than age 4, we estimate that the total amount spent on 4-year-olds is approximately $1.4 billion.[13]

If the federal and state resources from these programs currently spent on 4-year-olds are summed, approximately $6.4 billion are spent on these children under existing programs for a combination of preschool and child care. This does not include the substantial private monies spent on child care and preschool. We summarize these funding sources, after adjusting for inflation, in Table 1. Note that the programs depicted in this table offer a variety of services, and we do not suggest that the reader compare per-child funding levels as a measure of adequacy. Rather, we intend to give a sense of the revenues that our proposal, which we present later, might draw upon.

Mitchell, Stoney, and Dichter (2001) estimate that U.S. federal, state, and local governments jointly contribute 39 percent of the revenue used to finance child care and ECE, with families contributing approximately 60 percent and business and philanthropy supplying the remaining 1 percent.[14] We estimate child care use and expenditures in 1997 using data from the fourth wave of the 1996 Survey of Income and Program Participation as summarized by Smith (2002). Using the reported average weekly cost of $67 for preschoolers receiving some paid child care, we estimate that annual parent expenditures after receiving assistance from the federal or state governments are approximately $3,726 (2001 dollars). Smith reports that 51 percent of preschoolers receive some paid child care, so by applying this percentage to the population of approximately 3.9 million 4-year-olds, we estimate that total parent out-of-pocket

[13]To arrive at this estimate we used data from Schulman, Blank, and Ewen (1999) that describe the ages served by state prekindergarten programs. For programs that served children of ages other than 4, we evenly distributed program costs between the ages served.

[14]The authors note that the data, from Stoney and Greenberg (1996), are for 1995. They argue that although public expenditures have increased since 1995, so too has the overall size of the industry, likely leaving the proportions unchanged.

**TABLE 1**
**Major Programs That Subsidize ECE for 4-Year-Olds, by Funding Levels and Target Population** (2001 dollars)

| Program | Total Funding | Funding Devoted to 4-Year-Olds | Estimated Funding per 4-Year-Old | Target Population |
|---|---|---|---|---|
| Head Start | $6.0 billion | $3.3 billion [1] | $6,700 | Low-income children |
| CCDF | $7.2 billion [2] | $936 million [1] | $4,100 | Low-income children |
| Title I of ESEA | $8.4 billion | $216 million [1, 3] | $1,380 | Educationally and economically disadvantaged children |
| Tax policy (DCTC and DCAP) | $3.7 billion [4] | $500 million [5] | — | All children of employed parents |
| State Pre-K Initiatives | $1.9 billion | $1.4 billion [1, 6] | — | Varies |

1. Assumes program expenditures are uniformly distributed by age.
2. Does not include approximately $1.0 billion in direct TANF expenditures for child care.
3. GAO (2000) reports Title I funding for preschoolers, which it notes ranged between ages 3 and 5. We make the conservative assumption that 50 percent of these were 4-year-olds.
4. This funding level represents forgone tax revenue.
5. Assumes that the same proportion of CCDF program funding dedicated to 4-year-olds applies to these tax policies.
6. Based on data from Schulman, Blank, and Ewen (1999), which describe ages covered by state prekindergarten programs.

expenditures for 4-year-olds were more than $7.4 billion (2001 dollars). This exceeds the estimated $6.4 billion spent on 4-year-olds under the previously discussed federal and state programs.[15]

## III. EARLY CHILDHOOD EDUCATION IN THE UNITED STATES: STATE SYSTEMS

Although the system of ECE currently in place in the United States does not yet approach the dimensions of systems in other developed nations, as we discuss later, in recent years states have expanded both the availability and scope of services for 4-year-olds.

States develop their own programs and strategies for providing services to meet needs that are beyond the range of currently available federal programs. In doing so, states typically use one of several models, including universal preschool models, Head Start expansions, community partnership models, or kindergarten for 4-year-olds. Although this typology defines the nature of services provided, state programs vary within and across categories in a number of dimensions. Some universal prekindergarten models (New York, for example) aim to make some ECE available to all children, but require programs to provide services for only a few hours per day, for the school year. Others offer extended day programs, but for only a portion of the week or year. Still others offer full-year and full-time programs, but only to a targeted population, which is usually defined by family income.[16]

In total, 39 states and the District of Columbia offer and financially support a prekindergarten or early childhood education program that targets children aged 3 to 5 (Education Week, 2002). Although in most cases only a subset of children are eligible to receive such services, these programs represent a marked increase in the availability of ECE since 1980, when only about 10 states offered state-financed

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[15]The estimate of average weekly child care may overstate the actual costs for 4-year-olds if child care for younger children is relatively more expensive, causing our estimate to overstate actual expenditures. If, on the other hand, a larger proportion of 4-year-olds receives paid child care and ECE, our estimate of total expenditures will understate the true amount.

[16]These differences have been widely discussed in the literature, and summaries such as Education Week (2002) and Schulman, Blank, and Ewen (1999) provide excellent surveys of current and past state policy.

programs for their preschoolers. In the following section, we provide examples of state systems. We pay particular attention to both the scope of ECE and the financing methods used to fund these systems of ECE. With regard to the latter, we note that although most states fund their programs through general revenues—including some states with universal ECE programs such as the Distract of Columbia, New York, Oklahoma—others use different techniques, as is the case in Georgia's lottery-funded system.

Universal Preschool Models

If a universal system of early childhood education is the ideal, it is an ideal in need of careful definition. Program details and scope of coverage implied by universality depend very much on the dimensions that one seeks to target. Perhaps, for example, universality should suggest that all children of a certain age are eligible for a given program (e.g., Georgia, Oklahoma). A restricted version of this program might provide universal eligibility to a targeted group of children, such as those from low-income families or those facing other barriers to educational development (e.g., New Jersey, Texas). A stricter definition of universal might require that the program be accessible to all target children, thereby including features designed to make participation as easy as possible, such as transportation and extended hours.

Another dimension of universality involves the scope of services offered. Should ECE programs focus only on improving child development and school readiness, or should they also provide a work support for parents? As described elsewhere, this paper considers financing options for the case of universality as most broadly defined—universal programs that (1) offer preschool to all 4-year-olds, (2) provide full-day, full-year coverage, and (3) include provisions designed to ensure that the programs are accessible to working parents. Although several states have implemented programs that incorporate one of these aspects of universality, no state currently provides a comprehensive full-day, full-year program designed to both focus on school readiness for its 4-year-olds and provide work support for their parents.

The following discussion highlights states that have systems of preschool that most closely approach universality.

*Georgia: The Georgia Voluntary PreK Program*

Georgia provides the system of universal preschool that most closely matches our ideal model. The Georgia Voluntary PreK Program (GPK) offers ECE to all 4-year-olds in the state regardless of income and requires that programs be available for a minimum of 6.5 hours a day, five days a week, for the 180-day school year (for details see Schumacher et al., 2001). The program is financed by revenues from a state lottery established for this purpose.

GPK came about largely due to the political influence of former Governor Zell Miller, who initially focused on poor education outcomes in Georgia during his 1989 gubernatorial campaign. In this campaign, he proposed that the state institute a new lottery and dedicate the proceeds to early education initiatives. Once elected, Governor Miller continued to promote his idea, and his proposed Lottery for Education was amended to the state Constitution in November of 1992 after passing a public referendum with 52 percent of the vote.

The pilot program began in 1992 with a budget of $3 million and targeted children from low-income families. The program had no requirements for duration of program or curriculum, but did require communities to match state expenditures. In the first year, GPK served a total of only 750 4-year-olds. By 1994, however, the program had grown to serve 15,500 children from low-income families and had an average per child cost of $5,032. Growth in lottery revenues spurred this expansion, which also eliminated the local matching requirement.

In 1995, revenues from the Lottery for Education continued to grow in excess of expectations, and the state modified GPK to include all 4-year-olds in the state regardless of family income. The governor adopted this change in light of the booming lottery funds and a belief that making the program universal would lead to appeal and support among a broader constituency. In anticipation of program

growth and at least in part to further strengthen the program's ability to persist, Governor Miller established a new and independent state agency to administer the program- the Office of School Readiness (OSR). The expanded universal program was popular even in the first year as enrollment increased to 44,000 4-year-olds. By 1999–2000, GPK served 63,000 children with approximately $225 million in proceeds from the Lottery for Education funding this program. The Finance Project (2000) reports that Georgia enrolls approximately 70 percent of 4-year-olds in publicly subsidized preschool, including GPK and Head Start.

*Program Rules*. Currently, GPK remains open to all 4-year-olds without cost to the parent and regardless of family income. Programs provide at least 6.5 hours of ECE services a day and run for the school year, though, as described below, there is a movement to coordinate funding sources so that programs may offer extended-day and full-year child care to some children. Programs offering extended-day care may charge non-low-income families for these services, but the state recommends a maximum fee of no more than $35 to $70 per week.[17] Non-poor families may also be required to pay fees for food or transportation.

Programs provide educational services through a mix of public and private settings that include elementary, secondary, and postsecondary schools; private and public colleges; hospitals; military bases; private child care learning centers; and Head Start sites. In August 2000, the private sector provided the greater proportion of ECE, serving 36,921 children versus 27,299 in public settings. In either case, classes are required to have a staff-to-child ratio of 1:10 with a maximum of 20 children. Curriculum is set at the state level, though localities may choose from a set of state-approved models adopted from national proposals. The state has also increased the level of training required for its providers; lead teachers must have a college degree in a field related to early childhood education, certification in early childhood or elementary education, or a technical institute or two-year associate degree.

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[17]Low-income, or Category One, children are defined as those eligible for and participating in Medicaid, TANF, Food Stamps, or SSI.

The Office of School Readiness chooses providers via an application process for which they must submit a proposal describing a variety of plan features, including a detailed summary of program content and daily schedule, expectations for children completing the 180-day program, and proof of appropriate credentials and facilities. The state accepts applications for new programs in February and makes decisions between April and August. Expansions involving new providers may only occur in counties experiencing rapid growth in population or program enrollment or counties where less than 50 percent of 4-year-olds currently participate in GPK or Head Start.

*Program Funding.* Georgia's program is largely financed by lottery funds. Grants vary by location, teacher credentials, and number of children served, and may include a one-time payment of $8,000 in start-up funds for new classrooms. Statewide, the average allocation per child was $3,580 in 2000.[18] Georgia also uses federal funds available for early childhood education, including CCDF and Head Start. For low-income children, GPK funds are used for extended day child care for children in Head Start.

*New York: Universal Pre-Kindergarten (NY UPK)*

New York passed legislation authorizing the Universal Pre-kindergarten (UPK) program in August 1997, and did so with the intention of responding to evidence of poor educational development of 5-year-olds entering the school system as well as research that highlighted the long-term benefits of early education. Under UPK, all 4-year-olds would eventually gain access to prekindergarten classes, with full implementation scheduled for the 2001–2002 school year. While the state phased in the program, districts accessed program funds according to a grant formula based on economic need, so participating districts would be able to fund an increasing proportion of children until full universality was originally scheduled

[18]The state also provides limited funding for transportation to and from the program. However, this is only for low-income children and the state caps annual funding at a rate of $150 per year.

to begin in 2002. New York funds UPK from state general revenue and local tax revenues. Budget allotments and enrollment since program inception are as follows:

| **Funding and enrollment in NY UPK** | | |
|---|---|---|
| **School Year** | **Funding** ($ millions) | **Enrollment** |
| 1998–1999 | $62 | 18,300 |
| 1999–2000 | $100 | 27,460 |
| 2000–2001 | $225 | 46,567 |
| 2001–2002 | $500 (planned) / $275 (actual) | 52,000 (planned) |
| **Source**: Lekies and Cochran (2001) and Education Week (2002). | | |

Both public and private sources can provide UPK services, but the program's community collaboration element requires that localities contract out at least 10 percent of UPK funds to private community organizations. District-level advisory boards facilitate this collaboration by assessing the need for a UPK program, recommending an ideal program design and identifying key community participants. Lekies and Cochran (2001) report that in practice, the proportion of program funds devoted to these community and public ECE sources far exceeded this minimum, with 51 percent of upstate and 61 percent of New York City children attending UPK at a non-public school location in 1999–2000.

Although the state designed UPK with a goal of providing a minimum of 2.5 hours of ECE per day over the course of the school year, and included options for half-, full-, or extended-day services, it did not require localities to go beyond the minimum requirement. In 1999–2000, approximately 40 percent of non-NYC locations had a half- or full-/extended-day option, but the likelihood of this option being available differed substantially by whether the site was a school or community resource. For example, 60 percent of the community-based classrooms and 50 percent of Head Start classrooms offered either half- or full-day services. Only 30 percent of district-based programs did and half of these were half-day only. Only one-third of community-based organizations offered only half-day programs. In the

first year of implementation, the New York Independent Budget Office (1999) reported that NYC had 13,625 UPK children, 82 percent of whom were in a part-day program, 16 percent in full-day, and 1 percent in extended-day. This may imply the existence of constraints that present difficulties for school-based programs to provide the hours needed to support working families.

Several organizations monitored the implementation of the UPK program, including the Cornell Early Childhood Program (1999), the New York Office of the State Comptroller (2000), and the New York City Independent Budget Office (2000). Each noted shortcomings and areas for improvement that may be applicable to nationwide universal ECE programs.

The New York Office of the State Comptroller, for example, conducted a survey of nonparticipating districts in an attempt to assess the reasons for opting out of the program. The results suggested several problems consistent with other reports—59 percent reported a shortage of facilities or staff; 53 percent of providers cited insufficient funding; and 20 percent reported that the uncertainty of state funding was a major concern. We consider these problems in detail below.

Lekies and Cochran (2001) note that the NYC Board of Education expressed concern that state and federal class size reduction initiatives would lead to competition for teachers between UPK and regular school when the public schools provide UPK and regular services. This tension likely increased in the 2001–2002 school year as the state began to require certification of prekindergarten teachers. Shortages of teachers may be doubly severe as many localities, especially NYC, face overcrowded facilities and class size reduction initiatives in K–12 programs. More than 59 percent of districts that did not apply for UPK funds reported a shortage of facilities as a principal concern.

Budgetary instability also severely threatens the long-term viability of this program. New York determines UPK funding in the annual budget appropriation process and funding has been at risk during each year of the expansion. Executive budgets have both proposed cuts to the planned level and suggested providing the funding without dedicating it to UPK programs by converting the dedicated funds into a general education block grant. Most recently, the state postponed full universality until the 2002–2003

school year (Education Week, 2002). This delay was problematic for the 260 districts that planned to begin their UPK programs earlier in the year. Reductions in funding aside, the budget process concludes, at best, in the late summer while school districts and communities plan for the next school year in the spring. This timing gap affects the extent to which schools can plan effectively, and also threatens the program's success.

Hicks, Lekies, and Cochran (1999) suggest that a system that allows for both advance planning and stability of funds might allow districts to enter into multiyear contracts with providers so they are able to more effectively engage in long-term budgeting and planning and hence develop better programs and retain key staff. In a field where turnover is a systemic problem, UPK budgetary instability does little to help to develop a more stable work environment.

UPK also currently contains no provisions for funding transportation, which may be particularly troubling for parents who live in one district but work in another, or who live in rural areas. Parents are currently bound to the UPK program operating in their home district.

*Oklahoma: Early Childhood Four-Year-Old Program*

In 1998, Oklahoma passed legislation that expanded its Early Childhood Four-Year-Old Program from Head Start-eligible children to all 4-year-olds. In 2000–2001, the program budget of $48 million was sufficient to allow 80 percent of school districts in the state to offer the program and serve 20,370 4-year-olds, approximately 50 percent of 4-year-olds statewide (Education Week, 2002). Of these children, the state serves nearly 40 percent in 6-hour programs (as opposed to the program's alternative of 2.5 hours per day) which run the length of the school year for 5 days a week (National Center for Children in Poverty, 2000). The state increased funding for FY2002 to $57 million.

Districts receive funding according to a formula based on the number of children enrolled in part- and full-day programs where schools receive reimbursement for 0.7 and 1.3 full-time equivalent slots, respectively.

Oklahoma funds the program through state general revenue and appropriates funds to school districts on a first-come, first-served basis. Teachers must have certification in early childhood education, 5 years of experience in Head Start, or an associate degree in child development. Public school districts may choose to implement the program themselves or subcontract services to Head Start centers or child care centers that meet standards specified by the state, though only school districts may directly receive funds from the state. The maximum allowable class size is 20 and programs must maintain a 1:10 teacher-to-child ratio. Education Week (2002) reports that staffing shortages have been a major constraint for attempts designed to expand the program. Schulman, Blank, and Ewen (2001) report that beginning in 1998, Oklahoma created incentives for districts to provide extended hours by having the state cover any additional costs associated with expanding services.

*District of Columbia: Universal Preschool*

The District of Columbia has offered free universal preschool since the 1960s and currently provides a full-school day program at all elementary schools. Although all children are eligible regardless of family income, the program has limited space available and slots are available on a first-come, first served basis. Demand for these slots outstrips supply and long lines are reportedly common during the registration period. In 1998–1999, the District spent $14.5 million to serve 3,381 children via its Public School Preschool program, and had one of the highest per child expenditure ratios in the country at more than $4,000 per child (Schulman, Blank, and Ewen, 2001).[19]

Despite this preschool program, Education Week (2002) suggests that District residents face shortages of child care and after-school and summer facilities for older children—this presumably limits the ability to further extend services by using existing private child care providers.

[19]This probably reflects the cost of teacher salaries, which are comparable to K–12 teachers in the District. (Thanks to Ruby Takanishi for pointing this out to us.)

Legally Motivated Programs Offering Universal ECE in Limited Areas

State courts have issued rulings in several cases that affect the provision of prekindergarten programs in several states. These cases largely reflect concerns that the state does not provide low-income children, or all children in low-income areas, with equal educational opportunities.

*New Jersey: Abbott District Programs*

New Jersey currently provides ECE to all 4-year-olds residing in certain poor districts via two programs, both of which target only low-income districts. As described by Resnick (2001), the state's focus on these districts came about as a result of a series of lawsuits in which the New Jersey State Supreme Court has returned several rulings, each requiring the state to develop the system of ECE that is available to families living in impoverished areas.

In a series of decisions related to *Abbott v. Burke*, the Supreme Court of New Jersey first ruled in 1990 that certain districts did not provide an adequate or equitable education to their children. The court sought to ensure that disadvantaged children received the same early childhood educational opportunity as children in wealthier districts. The court first focused on equalizing spending in the 30 low-income districts, in which approximately 25 percent of the state's children live, but in 1998 ruled again and required half-day preschool programs for 3- and 4-year-old children living in these areas, which came to be known as the Abbott districts. The court required that the programs have a maximum class size of 15 students, have both a certified teacher and an assistant for each class, have adequate facilities, and have transportation services where needed. Additionally, the court suggested that school districts had the primary responsibility for meeting the court's requirements, though it ordered the state to provide the funding necessary for districts to do so.

In 2000, Governor Whitman signed legislation requiring programs to offer ECE services for up to 10 hours a day and expanding the annual operating period to 250 days (Education Week, 2002; Barnett et al, 2000). In the same year, the state Supreme Court found that the Abbott districts were still not

providing a program of adequate quality and therefore set a requirement that newly hired teachers must have a bachelor's degree and a teaching certificate and re-emphasized that the state bore the burden of providing financing for the facilities needed to accommodate this new program.

The following year, Early Childhood Program Aid served an estimated 29,000 3- and 4-year-olds (of 54,000 eligible) in programs that the state created in response to *Abbott*. A separate state initiative that provides funding to 100 smaller non-Abbott districts required these districts to provide half-day kindergarten to 4-year-olds living in areas where student poverty rates exceed 20 percent. Abbott districts and the state are having difficulty providing ECE to all eligible students because of teacher shortages and a lack of facilities. Education Week (2002) reports that in 2002, the state approved a $5 million incentive plan to recruit more teachers through signing bonuses, student loan forgiveness, and free laptop computers for new recruits.

The Center for Early Education Research at Rutgers University evaluated the state's response to *Abbott* and found that lack of transportation was a significant barrier to participation just as lack of adequate facilities was a limitation on provision. Blank, Bohr, and Schulman (2001) note that the state recently approved a $12.6 billion bond program to finance facilities for public and community-based preschool. The authors found that the program served 9,636 4-year-olds in 2001, with 70 percent of sessions lasting longer than four hours per day. The average cost per child was $4,240 for part-day programming and $8,438 for full-day programming (based on survey reports from 27 districts).

*Connecticut: School Readiness and Child Care Initiative*

Connecticut also developed its early childhood education efforts in response to court action. In the 1996 *Sheff v. O'Neil* ruling, the court directed the state to improve the educational opportunities available to its low-income children (Education Week, 2002). In response the state passed the School Readiness and Child Care Initiative in 1997, designed to improve school readiness of 3- and 4-year-olds.

The program provides universal eligibility to children in districts or schools where the program is offered, but the state gives priority to low-income districts and schools (defined as locations in which 40 percent of children are entitled to free or reduced-price lunch) when determining in which areas the program will be available. Programs may be located in a variety of settings, including schools, child care centers, or Head Start locations. Local or regional school readiness councils provide assistance with organization. Bank Street College (2000) notes that these councils bear the responsibility of coordinating program elements to provide full-day, full-year child care as required by the state. Mitchell (1998) reports that facilities must maintain a 1:10 faculty-to-student ratio, with required staff experience or certification varying across districts.

In 2002, the program has a total budget allocation of $37.2 million and will serve approximately 7,000 children who largely reside in 17 low-income districts identified by the state as priority districts. The state distributes grants to municipalities, which then allocate funds among providers based on the recommendations of local School Readiness Councils, which are subject to Department of Education and Department of Social Services approval (Mitchell, 1998). The state focuses on providing full-day/full-year child care, defined as 10 hours per day for a full 52 weeks where possible, and 75 percent or more of spaces meet this goal. Capacity, however, is limited and the Connecticut Department of Education estimates that 15,000 more low-income children would take advantage of the program if more spaces were available (Education Week, 2002).

The state has also made approximately $50 million available in the form of discount loans to districts that need to upgrade current facilities or expand the number of facilities, though the amount allocated for this purpose has nearly been exhausted and new appropriations would be needed for further development (Education Week, 2002). The Committee for Economic Development (2002) further describes this “pooled revenue bond” program, which allows prekindergarten providers to obtain low-interest loans that only require 15 to 25 percent of the principal to be repaid. The maximum annual loan amount is $25,000 (Blank and Oxendine Poersch, 2000).

Community Partnerships

Many states provide funds to communities to serve targeted populations most in need of additional funding for ECE. Although these programs are not, nor are they intended to be, universal, methods of service provision and financing may be of interest insofar as the areas *do* expand services (and we can get some idea of expansion costs). Rather than delivering a specific program, such as a defined preschool curriculum or Head Start program, to a specific group of children, the philosophy of the community partnership model is to improve and extend early childhood services in a way that meets the needs of the individual community—within a broad set of objectives set at the state level. Fourteen states currently use this strategy in some form, but programs differ in their objectives, funding sources and uses, and ways in which programs are organized and administered at the state and local level.[20]

**Massachusetts** initiated its Community Partnerships for Children (CPC) program in 1993 to address the need for the state's working families to have affordable and accessible early childhood programs. The state legislature designed the program to focus on providing coverage for children and families usually left of out the subsidized child care system—those with income between 50 and 100 percent of SMI (SMI was $68,958 for a family of four in 2001). CPC now serves 3- to 5-year-olds with a working or disabled parent and income up to 125 percent SMI (in districts that choose to extend the threshold) with a sliding fee scale.[21] In 2001, the program had a budget of $104 million and operated in 332 of 351 cities and towns, serving approximately 20,000 children. The budget is a function of allotments under the state budget and is therefore a subject of uncertainty for providers, who must submit annual requests for continuation or expansion.

Schumacher et al. (2001) provide much information on CPC, a state-to-local grant program administered by the Massachusetts Department of Education that gives communities considerable

[20]The states are AL, AR, CA, CT, GA, HI, IA, MA, MN, NE, NM, TN, VT, WA.

[21]Copayments yielded $11M. Set according to the OCCS scale.

discretion to meet their own needs within state objectives. To participate, communities must form a planning and policy-making council charged with selecting a lead agency, conduct a community needs assessment, and submit a plan to DOE to meet the above targets based on the needs assessment. In an attempt to address the program's focus on working parents, one-third of available slots must be full-day/full-year slots. Local providers may also use CPC funds for facility improvement or construction.

Until recently, the state funded the program entirely through state general revenues and proceeds from the program's cost-sharing requirements. Beginning in fiscal year 2000, Massachusetts claimed $20 million of CPC funding for families with incomes less than 100 percent SMI as TANF maintenance of effort dollars. In 2001, the state replaced 45 percent of the state dollars spent on CPC with funds transferred from the state's TANF grant (Schumacher et al., 2001).

The state did not, however, design the program to provide universal ECE. This program is an expansion of help to low-income families and, given the SMI, a generous one. Still it does not appear to provide the kind of full-day/full-year ECE that we address in this paper. In addition, the long-term viability may hinge on the continuing ability to shift a big portion of TANF funds to the program or continue to receive appropriations in the absence of this source.

Head Start Expansions

Other states increase access to early childhood education through expanding Head Start, at times in conjunction with other state pre-K initiatives, as Schumacher, Greenberg, and Lombardi (2001) describe. Twenty-one states and the District of Columbia currently use this strategy and provide state supplementation designed to promote a variety of expansions in program services, though most focus on increasing the number of slots available to eligible children or improving program quality. Some states such as Massachusetts use funds for initiatives designed to provide Head Start instructors with higher salaries, while other states like Ohio use state supplements to expand the program's operating hours. Ohio also uses state funds to develop collaboration between Head Start and other players in the ECE system.

The Center for Law and Social Policy describes this approach as unique among states' current efforts to supplement federal Head Start funding. This section focuses on Ohio because its expansion appears to be most generous and funds a variety of additions to the core Head Start program.

Ohio has taken one of the most aggressive approaches to expand the reach of Head Start since it initiated pilot programs in 1988. A desire to increase the availability of Head Start program services for the state's low-income families originally motivated the state's focus on early education. Ohio modified this plan to focus on bringing Head Start services to eligible children where they currently received child care, rather than relying communities to shift children to Head Start facilities. State officials recognized that the child care system already subsidized many Head Start eligibles and began work to blend the two funding streams in 1995.

In 2002, Ohio's state-federal Head Start partnership reached approximately 54,000 children (53 percent of whom are 4-year-olds); take-up among eligible 3- and 4-year-olds is greater than 70 percent, versus a national average of 45 percent (Education Week, 2002). Planned state aid to Head Start in 2002 is $99 million, reduced for the first time since 1990 from a 2001 allocation of $101 million. Ohio also changed the funding source for the program from state general revenue to the state's TANF block grant, which carries restrictions on program parameters and participants that were not present under the state aid plan. This funding change was likely made in response to the recent Ohio Supreme Court ruling that the state must improve its K–12 school system, and this requirement may have led to competition for state funds, teachers, and facilities (Education Week, 2002).

Collaboration of Head Start and CCDF activities largely takes place in one of two forms. First, consistent with the aforementioned desire to expand the reach of Head Start services, child care centers or other providers may receive Head Start funds to supplement any CCDF funds that providers receive so that they can provide comprehensive services and extend the duration of child care by blending funding streams. These providers must meet Head Start program requirements only for the portion of the day funded with Head Start dollars. The second model involves blending funds at a Head Start site, where

local providers use child care subsidy funds to expand the duration of services beyond the 3.5 hours of child care typical of half-day Head Start programs (Schumacher, Greenberg, and Lombardi, 2001). The state also uses $6million in funds from Head Start and its TANF Welfare-to-Work budget to provide extended hours for Head Start families who need extended day child care (Bank Street College, 2000). These programs reflect Ohio's emphasis on providing full-day (6+ hours) child care. In total, state funds serve 22,000 of the 54,000 children, with federal dollars funding the child care for the remainder.

Schumacher, Greenberg, and Lombardi (2001) also note that although Head Start requires that 90 percent of children served come from families with income below the poverty line, the state recently allowed Head Start grantees to apply for waivers that allow them to increase the income threshold for Head Start services to 125 percent of FPL.

Education Week (2002) reports that Ohio also runs a public preschool program available to children from families with income up to 185 percent of poverty. This is an optional program and provides part-day services (minimum of 3 hours) in 55 of Ohio's 88 counties. State funding is limited to children from families with income less than 185 percent of the federal poverty line, but parents with income greater than the poverty level may enroll but pay for the program using a sliding fee scale, and higher-income families may purchase preschool for their children once a school has enrolled a number of low-income children as specified in its grant contract. In 1998–1999, the program served 7,800 3- and 4-year-olds with a funding level of $17.9 million (Schulman, Blank, and Ewen, 2001).

4-Year-Old Kindergarten

A small set of states provide ECE through extended kindergarten programs. Wisconsin, for example, offers voluntary kindergarten for 4-year-olds in one-third of its 426 school districts. In 2001, the program served 13,000 students, about one-fifth of eligible 4-year-olds, for which the state spent $31.6 million (Education Week, 2002). The half-day (two to three hours) programs are accessible to all 4-year-olds in districts that choose to offer services, though attendance is voluntary. Participating districts

receive a per-pupil reimbursement from the state equal to approximately 50 percent of the rate that a district receives for its full-time pupils.

In Maine, schools in 60 of 285 districts provide part-day kindergarten for 4-year-olds and serve approximately 1,000 children through this program, which operates on a first-come, first-served basis. As described by Schulman, Blank, and Ewen (2001), the state reimburses districts after they complete their second year of operation and does so based on average daily attendance and the poverty level of the district. Most participating districts receive funds representing approximately half of their program costs (Education Week, 2002).

West Virginia also offers services for 4-year-olds through its kindergarten system, and has done so since 1983. In 1998–99, the program enrolled 5,600 4-year-olds and had a budget of slightly more than $6 million. The state distributes program funds to school districts through the state's general education aid package, and districts are free to expand their kindergarten programs if they wish. Schulman, Blank, and Ewen (2001) note that the state sets no requirements for class size or hours of operation, but does require teachers to have certification in elementary education. West Virginia appears to be moving away from this system as it is currently in the process of developing a more comprehensive prekindergarten plan that will include private ECE providers.

Texas initiated its Public School Pre-kindergarten Program in 1984 and designed the program to assist 4-year-olds who are either unable to speak or comprehend English, economically disadvantaged (measured by eligibility for the free lunch program), or homeless (Schulman, Blank, and Ewen, 1999). School districts are required to provide the program if there are 15 or more eligible children in the district.

Texas distributes funds to the prekindergarten program through its Foundation School Program, as it does the rest of its K–12 education system. Mitchell, Stoney, and Dichter (2001) note that under this program, districts receive funding from the state based on average daily attendance of preschoolers. Districts match state payments and the authors estimate that per pupil aid was approximately $2,500 in the 1998–99 school year, half of which the state provides. Although state funds are only available to

school districts, districts may subcontract with other providers including Head Start centers and private child care centers that meet the programs teacher certification and curriculum guidelines. In 2001, total state expenditures were approximately $267 million, and nearly 150,000 children from 844 of the state's 1,057 counties participated. State officials estimate that 72 percent of eligible 4-year-olds participate in the program (Education Week, 2002).

Although the program was designed as a part-day program, meeting five days a week for a minimum of three hours per day, the state legislature in 1999 approved spending an additional $100 million in each of the two following years, most of which was designed to allow districts to expand the availability of full-day ECE. Although no data are available to describe the extent to which the availability of full-day programs increased, the legislature did renew the annual funding extension in 2001 (Education Week, 2002). The state also now allows districts to offer prekindergarten for 3-year olds if they choose and permits districts to allow ineligible children to participate if they pay a tuition equal to the per-child cost of the program in a district.

In keeping with the Public School Pre-kindergarten Program design as part of the education system, the state requires teachers to be certified in elementary education with a focus on ECE or kindergarten or to have a college degree with a focus on ECE (Mitchell, Stoney, and Dichter, 2001). The state also publishes curriculum guidelines which districts are expected to follow. Education Week notes that a shortage of qualified teachers with special training, including fluency in Spanish, may hinder the further expansion of the program.

Mitchell, Stoney, and Dichter (2001) note that providing funding through the education system likely lends stability to program when compared to those financed by general revenues which are more vulnerable to being cut in the annual state budget process.

Grissmer et al. (2000) examine cross-state changes in student achievement, as measured by the National Assessment of Educational Progress test, between 1990 and 1996 and, using a multivariate

analysis to control for family and state characteristics, partially attribute Texas's improved ranking to the availability of the state's preschool program.

North Carolina's Smart Start and California's Proposition 10

In 2001, North Carolina expanded the budget for prekindergarten programs targeting at-risk 4-year-olds, while cutting funding for Smart Start to $210 million—a reduction of $60 million. Blank, Behr, and Schulman (2001) suggest that this expansion in funding for the prekindergarten program (to $12 million over two years) was partially prompted by a Superior Court ruling that the state must provide a sound, basic education to students at risk of failure.

Smart Start, launched in 1993, is a public-private partnership that provides funds from state general revenues and private contributions (of more than $100 million since program inception) to groups that provide services to children and operates in all of the state's 100 counties (Families and Work Institute, 1999). Smart Start targets child care, and program rules require that recipients spend 70 percent of program funds on child care and dedicate 30 percent of these funds to provide subsidies to low-income children. Providers may spend the remainder of the funds on other programs designed to benefit children, including health care and family support programs (Education Week, 2002). Local-level planning teams determine the ultimate allocation of program funding, and are also responsible for monitoring local programs (Schulman, Blank, and Ewen, 2001). A variety of agencies are eligible to provide services using Smart Start dollars, including public schools, child care centers, Head Start agencies, and others. Program parameters are set at the local level and localities offer a variety of services. No general rules address the duration of programs offered to 3- and 4-year-olds, and local areas can use funds to support programs for children aged 0 to 5. The North Carolina Partnership for Children, a nonprofit organization established through the original legislation, evaluates local plans and adjusts funding levels to meet needs. The state uses a large portion of program funds to increase the quality of the state's child care workers by offering scholarships, salary incentives, and health insurance coverage for child care providers.

In November 1998, California residents voted to establish the Children and Families First Program (also referred to as Proposition 10), designed to strengthen existing programs and to bring about new programs designed to support early childhood development. The plan is financed by a 50-cent-per-pack increase in the cigarette tax, which the Children and Families First Commission (2002) estimates will bring in approximately $700 million statewide. In Los Angeles County, which receives approximately $165 million annually, a current proposal aims to use a portion of the revenues from this cigarette tax to fund a universal preschool program, which would first target 4-year-olds, and includes quality improvements to facilities (Jacobson, 2002).

California also runs a Head Start expansion designed to provide programs for 3- to 5-year-olds from families with incomes below 60 percent of SMI, and serves approximately 40 percent of eligible children through this and the federal Head Start program combined. The state also uses CCDF and TANF funds to subsidize child care, but despite this program and increased overall spending on child care and education, large waiting lists for subsidized child care still exist, with more than 300,000 eligible children (of all ages) currently waiting for subsidized child care (Education Week, 2002).

In summary, state-financed prekindergarten initiatives are most often financed with general revenues, though as we note, several states have successfully used financing approaches such as lotteries and a variety of tax policy instruments.

## IV. FUNDING FACILITIES

Given the call for increased availability of early education for 4-year-olds, it is important to consider whether there are enough facilities capable of providing a good quality environment and, if a shortage of space exists, what financing options exist for providers that wish to expand. Trinita Logue (2002) of the Illinois Facilities Fund, a member organization of the National Children's Facilities Network, notes that shortages of early childhood education and child care facilities exist in many areas

nationwide, and suggests that difficulty in raising capital to finance expansion or new facilities plays an important role in the existence and persistence of this shortage.

Early education staff and management specialize in providing quality education and child care for children, but often lack knowledge about the capital market and processes and needs for securing funding for capital projects. The likelihood of obtaining needed capital is often doubly challenging because facilities tend to be purpose-built and may not be easily adapted to other business needs, limiting their usefulness as loan collateral. As a result, child care providers often lack the equity necessary to secure a loan with reasonable interest rates.

A few federal sources of financing are available to assist with financing new facilities or upgrades to existing facilities, though some state and local governments have programs designed to provide assistance. In many cases, these programs take the form of direct assistance from the local or state government, but some states take advantage of partnerships with private sector organizations. Mitchell, Stoney, and Dichter (1997 and 2001) provide excellent overviews of these programs, which we summarize below.

Certain state and local governments establish funding initiatives that directly address capital needs related to child care facility construction, expansion, or renovation. Connecticut, for example, makes long-term, low-interest loans, financed by tax-free bonds, available to nonprofit child care providers in need of capital via the Child Care Facilities Loan Fund. These loans often exceed $500,000 and are most often amortized over 30 years. Between 1998 and 2001, the state raised approximately $45 million from bond sales under this program, which supported nearly 30 new facilities. The Connecticut Department of Social Services runs a complementary program that pays up to 85 percent of the debt services on these loans, for which the state dedicates approximately $2.5 million in general revenue annually. To encourage high quality child care, the state gives priority to child care providers that are NAEYC certified when allocating funds.

Florida's Child Care Financial Assistance Program incorporates incentives for child care providers to improve quality; centers may receive grants of up to $2,500 to pursue quality improvements and become accredited child care providers. The state supports this program with approximately $1million in annual transfers from its CCDF and TANF programs. Minnesota also focuses on quality, and uses revenue from general obligation bonds to promote quality improvements in its schools and early childhood education facilities, though recipients of such funds must be publicly owned entities. In New York, the Regional Economic Development Partnership Plan and Department of Economic Development provide general development grants to fund child care construction projects.

Under Maryland's State Loan Guarantee program, the state guarantees up to 80 percent of loan principal for child care capital projects, providing much greater incentives for lenders to work with child care providers and offer reasonable interest rates. The state also uses appropriated general revenue to offer below-market-rate loans for up to 50 percent of the total cost of a facilities project, with approximately $2 million allocated to this source of funds annually.

The aforementioned states attempt to encourage facilities through state programs, but another strategy involves making use of private organizations that act as intermediaries and bring funds together from a variety of sources. Massachusetts pursues such a strategy with its Child Care Capital Investment Fund, created to provide funding as well as technical assistance to child care providers seeking to fund development projects. The fund consists of grants and loans from a variety of institutions including foundations, state and local government, banks, and insurance companies. The program has an annual lending capacity that varies from approximately $300,000 to $700,000. Although loan amounts can be as large as $300,000, the majority of loans fund much smaller projects. Loan recipients must be licensed, nonprofit, and serve a population of which at least 30 percent are low-income families.

Ohio uses its Community Development Finance Fund to back loans for child care facility development. It does so using a strategy of linked deposits under which the state deposits funds with a lending institution financing a particular project. These state funds are used to guarantee the loan and

provide an incentive for lending institutions to reduce the interest rate applied to financing the project. The state then uses interest from its deposit to help defray other loan costs that the child care provider may incur. The scope of this program is limited, as only Head Start providers and nonprofit organizations that primarily serve low-income families are eligible to participate in the program.

The Illinois Facilities Fund (IFF), a nonprofit organization, provides low-interest loans and technical assistance to nonprofit groups, including child care providers, that need assistance with projects involving new facilities or renovation of existing structures. The IFF takes advantage of public-private partnerships and has worked with the City of Chicago and the Illinois Department of Children and Family Services as well as foundations, community development corporations, financial institutions, and child care providers, all with an interest in making available the funds needed to increase the availability of quality child care facilities. In an early project, IFF borrowed $13 million in funds through tax-exempt bonds to construct five new child care centers and renovate two existing structures. IFF sold the bonds to private investors and received support from the Department of Children and Family Services, which agreed to repay the debt over 10 years. The IFF also recently conducted a needs assessment that identified a shortage of facilities for early childhood education programs in many of Chicago's low-income areas. The City of Chicago has since agreed to provide half of the funds needed to begin a $40 million facilities development project, with the IFF set to raise the remainder via a newly formed bank consortium.

The city of San Francisco created a child care facilities fund from combined public and private funds and uses this fund to meet federal program matching requirements. With respect to child care facilities, the fund was tapped to obtain $10 million for new and renovated child care facilities using Section 108 loans from the U.S. Department of Housing and Urban Development. The City Department of Health and Human Services will repay 80 percent of the debt from these loans. Although the Section 108 loan program, a provision of the Community Development Block Grant program, does not specifically target early education facilities, construction of child care facilities in low-income urban areas clearly falls under the program goals. This program is a promising source of federal revenue.

Costs vary dramatically based on local real estate, needs, CCDF reimbursement rates, and local demand for child care. Given this variation, Logue suggested that it would be extremely difficult to obtain a reasonable estimate of the cost of meeting the current need for facilities or future need under assumptions of increased use of child care. Although financing of child care facilities has been formally proposed several times and included in a number of bills, most recently as an allotment of $100 million per year for 5 years, the financing measure has not yet been enacted. This appropriation is not meant to be reflective of the cost of needed facilities, but instead reflects political constraints.

Another alternative involves including child care or ECE programs in existing public school facilities or designing policy that requires ECE classrooms to be included in new construction. Although no cost estimates of pursuing such a policy on a national level have been advanced, the New York City Independent Budget Office (IBO) (1999) conducted a cost assessment of the UPK program in NYC under full implementation (originally scheduled for 2001–2002, but as noted above the governor temporarily froze the budget at its 2000–2001 level in last year's appropriation process) in which they give attention to the need for and cost of providing the facilities to meet demand under full roll-out of UPK and competing class size reduction plans.

The IBO estimates that the average cost for a classroom constructed in BOE facilities ranges between $42,000 and $47,000 per seat. Assuming 25-seat classrooms, the then current standard, between 1,200 and 1,700 classrooms would be needed, depending on program take-up. Annual debt service for the $1.3 to $1.8 billion in capital costs would be $96 million to $129 million. IBO then re-estimates the need for facilities assuming that there is a concurrent attempt to meet state class reduction standards in public school facilities. In this scenario, needed classrooms increase to 4,200–4,600 and costs increase to $4.4 to $5.0 billion.

Construction costs in New York City are by no means illustrative of average costs nationwide, but the difficulties in using existing public school facilities given class reduction initiatives or currently overcrowded conditions in elementary education will likely be faced in other areas as well.

Existing facilities could easily be used for ECE when schools are not in session but this is not useful for 4-year-olds. It would meet demand for facilitation for summer programs and after-school programs for older children, perhaps freeing up some existing facilities currently used for such purposes.

States might also begin to meet the need for ECE facilities by requiring new education construction projects to incorporate ECE classrooms as budgets allow and demand for ECE requires. Mitchell, Stoney, and Dichter (2001) note that California's Santa Cruz County requires new real estate projects to make a contribution designed to offset any increase in the need for child care as a result of the project. Under this Child Care Developer Free Loan Program, fees from construction projects are awarded as loans or grants by county administrators to child care centers that apply for assistance. The estimated grant volume ranges between $50,000 and $100,000 per year.

An experimental program in several communities in Pittsburgh used foundation funds to build new facilities (Gill et al., 2002). Because the program was community based and communities could request resources, the amount requested and spent on new facilities and new centers was far above projections. Using a 7 percent interest rate and a 15-year period for amortization, the costs of capital accounted for 5.12 percent of total costs for the program. The recent review suggests that this unexpectedly high proportion reflects a wish to focus on new centers rather than work with existing centers.

## V. INTERNATIONAL PERSPECTIVES: EARLY CHILDHOOD EDUCATION IN OTHER DEVELOPED NATIONS

Although an extended investigation of international ECE systems is beyond the scope of this paper, a major lesson can be learned by comparing the U.S. system of ECE to systems in other developed nations. Put succinctly, the U.S. ECE system for 4-year-olds falls short of that offered in other developed countries and, in most cases, does so substantially.

Internationally, existing systems of ECE in OECD countries for children between 3 and 5 years old have increasingly become universal and often provide full-day, full-year services (Kamerman, 2000). Countries such as Belgium, France, and Italy provide ECE to preschool-aged children via free, education-based programs that serve between 95 and 99 percent of children aged 3 to 6. These programs run between 7 and 8 hours a day at no cost to parents, with extended childcare services available if parents choose to pay fees that are a function of their income.

The Scandinavian countries of Denmark, Finland, and Sweden provide ECE programs that more closely resemble a support system for working parents, with services that cover the full workday and run year round. And although these Scandinavian countries tend to focus on providing services to children from families with working adults, they nevertheless provide coverage for the majority of 3- to 5-year-olds because of the high rates of labor force participation in these countries. The programs currently cover between 73 and 83 percent of preschool-aged children, and the Scandinavian countries have all recently committed to providing coverage to all children.

European countries that do not currently offer coverage regard improving access to ECE as a policy priority and have begun initiatives to transform their programs, most of them on a scale that outstrips current U.S. efforts (Kamerman, 2000; OECD, 2000). Again, in countries offering such programs, take-up is quite high (at or only slightly below 100 percent of eligibles in many cases). Although the United Kingdom has traditionally shared the U.S. focus on targeting ECE funding on children from low-income families, OECD notes that the United Kingdom implemented a new system in 1998 under which all 4-year-olds have an entitlement to at least a part-day nursery school session.

Despite the wide availability of ECE in most Western European and Scandinavian countries, the OECD notes that, with the exception of the latter countries, ECE programs often do not cover the full working day and hence are incomplete in their role as work supports. In many countries, however, this reflects the historic program focus as educationally and developmentally oriented. Most of the countries are reported to offer wraparound services, but they are staffed by less-qualified instructors and tend to be

funded by parent fees, though the fees are modest. OECD notes that there is need for improvement and consistency in these programs, which in many cases have been motivated by the more recent focus on providing work support.

Kamerman (2000) reports that ECE programs in most OECD countries are publicly delivered and are financed through public sources. Services are most often provided in publicly funded and purpose-built facilities, which are often located in proximity to primary schools or in the schools themselves. Public funding sources vary by country; some, such as France, provide most of the funding on a national level, whereas other countries turn to programs supported to a larger extent by local government, as is the case in Italy and Germany (Meyers and Gornick, 2000). Both France and Italy group funding for preprimary programs with primary school funding and as a result it is difficult to attribute funding to individual programs for these countries and ECE programs in most other European and Scandinavian countries.

Below, we provide additional detail on the French and Swedish systems of ECE, which illustrate the standard education-based approach to ECE and a system that was built on a tradition of providing work supports, respectively.

The French Écoles Maternelles

The French-American Foundation (1999) provides an excellent summary of France's ECE system, as reported by a delegation of 15 Americans, including journalists, advocates, and ECE researchers who sought to learn from this system. In this section we describe program features, with attention to financing methods and program content.

The French national government has financial responsibility for paying, training, and managing teachers, while local governments provide the funds needed to pay for nonteaching staff, school facilities, and infrastructure, including efforts to provide wraparound child care services. Local program efforts are managed by a school council consisting of the school director, teachers, and parents. The national

government also defines program content, so services are, at a programmatic level, consistent across the country. National administration falls under the auspices of the Ministry of Education, which also administers the compulsory education system for children aged 6 and older.

Nationwide, there were approximately 19,000 écoles maternelles in 1999. These locations most often provided ECE for 6 hours a day with additional wraparound child care available at a small additional cost to parents. Group sizes were larger than the current U.S. standard—experts observed relatively large groups of 25 or more students, who were taught by a single teacher and a part-time aide. Program costs in Paris were estimated to be approximately $5,500 in 1999.

The national government also identifies disadvantaged geographic areas as educational priority zones, known as ZEPs. By developing zone-level councils to coordinate education with other community resources including social service organizations, ZEPs aim to increase educational quality in areas where there might otherwise be deficiencies in educational attainment. Schools in ZEPs receive additional funding to support class size reduction efforts, purchase additional materials, or fund specialized teachers where needed. Programs in ZEPs also focus on increasing the enrollment among 2-year-olds, based on research conducted by the University of Burgundy that suggests long-lasting improvements for children who enroll in écoles maternelles at a young age, relative to those who do not.

Teachers in écoles maternelles receive the same level of training and salary as elementary school teachers. They must earn a 3-year university degree, supplemented by an additional year of training at a teacher training institute run by one of the public universities. The supplemental year is paid for by the French government. Teachers then participate in a one-year training program in which they conclude their course work and practice their teaching skills in schools. Once training is completed, teachers are eligible to take 36 weeks of paid training during the rest of their careers. Turnover rates are less than 10 percent.

A variety of options for before- and after-school care are available. Localities provide wraparound child care in facilities near the écoles maternelles for working families. Other families may

chose to use Centres de Loisirs san Hébergement, recreation centers that provide child care to children of all ages, at a cost to parents that is determined by a sliding fee scale.

Strong public support for ECE enables the local-level funding. As described by Education Week (2002), the Ministry of Education reports that there was limited resistance from some mayors, but that this resistance quickly dissolved in the face of strong public interest in the program.

ECE in Sweden

Gunnarsson, Korpi, and Nordenstam (1999) of the Swedish Ministry of Education and Science provide an interesting depiction of Sweden's system of ECE, which is characteristic of the Scandinavian systems, which most commonly focus on providing support for working families. In Sweden, program funding and administration have taken an increasingly local focus since the early 1990s, and the obligation to provide child care for children aged 1 to 12 now falls on municipalities. The public child care system has recently been formally included as a part of the educational system, marking a shift away from the traditional focus on child care serving the primary function of a work support.

The relatively new shift toward municipal responsibility has both brought about the ability of localities to meet their needs and created variation in available services at the national level. Sweden's Ministry of Education and Science, for example, notes program length, content, teaching requirements, and parental fees vary considerably across different municipalities. Although program content and scope vary, national goals and guidelines set boundaries for local programs. Participation is high and although the programs focus on providing assistance to working families, high rates of labor force participation limit the extent to which the programs exclude some children. The Ministry of Education and Science reports that 69 percent of all 4-year-olds are enrolled in Sweden's preschool system.

Program funding is shared between national and municipal governments, where municipalities receive both block grants and equalization grants from the national government. Municipalities then supplement these funds with local income taxes and parental fees. The latter fund approximately 17

percent of local expenditures and are based on the number of children in child care, the amount of child care used, and family income. Because fee structures are set at the municipal level, the use of fees varies across municipalities. Legislation also allows municipalities to contract with private providers as long as the financial conditions, including parental fee structure, are the same as public facilities and facilities meet local standards.

On average, education accounts for one-third of total municipal costs, and ECE, (broadly defined as including children aged 1 to 12) makes up one-half of education costs. This system provides municipalities with considerable freedom in choosing how to meet their obligation to provide quality child care and marks a considerable move away from a system that has historically been centrally controlled. Also, the OECD notes that Sweden is moving toward a universal approach, and bills that propose free prekindergarten for all 4- and 5-year-olds are currently under consideration.

In conclusion, we note that, on average, international systems of ECE tend to be comprehensive and affordable to parents. In comparison, for example, to the 39 percent contribution to child care and ECE made by U.S. federal, state, and local governments that we earlier reported, Waldfogel (2001) reports that France, Germany, Italy, and the Scandinavian countries contribute at least 70 percent, and often far more, to the cost of ECE.

## VI. UNIVERSAL PREKINDERGARTEN AND ECE PROPOSALS

In this section, we present a variety of proposals that address the need for expansions in scope and quality of our nation's system of ECE. We have selected what we believe to be a representative sample of current proposals that directly address the need for reformed child care policy and attempt to estimate the costs of doing so. Most proposals call for increased federal financing despite the recent increases in state-level financing described above, but incorporate a variety of different features. Many attempt to measure the costs of providing their variety of ECE services, but little attention is devoted to

identifying the source from which the required funds should be drawn. We build upon this shortcoming in the following section by presenting our proposed approach to providing universal ECE to 4-year-olds, which would be funded largely by parents or an ability to pay basis using the tax system to determine required contributions. We conclude by considering this body of proposals, which we present in matrix form in Table 2, and their implications for future policy.

## Sawhill and Thomas (2001a)

### *Proposal Description*

Isabel Sawhill and Adam Thomas (2001a) estimate the effects and costs of several alternative child care policies using a well-constructed simulation methodology that takes advantage of data from several sources. Their policy suggestions and cost estimates include universal prekindergarten, a fully refundable and expanded dependent child tax credit (DCTC), and an original proposal in which subsidies are a function of the poverty gap. Before describing the specifics of these proposals, we briefly discuss their estimation procedures.

To simulate child care expenditures, the authors use models based on data from the 1992 Survey of Income and Program Participation (SIPP) which, unlike the Current Population Survey (CPS), contains data on child care expenses. They first simulate the presence of any child care expenditures for families that have any children under age 12 and in which all household parents work. Families that are assigned some expenses then enter a second simulation that sets the level of expenses (capped at 50 percent of total earnings in single-parent families or 50 percent of the lower earner in two-parent families).

Sawhill and Thomas also allow some nonworking family heads to (re)join the labor force if they are likely to be directly affected by the policy options under consideration. To do so, the authors simulate hourly wage and hours worked to predict annual earnings. These predicted annual earnings, in combination with hours worked, are then used to determine other necessary items such as tax liability,

**Table 2**
**A Comparison of The Financing of Preschool in Selected Proposals**

| Proposal | Sliding Fee Scale | General Revenue Funding | Surplus or Reallocation | Replaces Existing Subsidies | | Other | Non Financial Policy | | Strengths / Unique Features |
|---|---|---|---|---|---|---|---|---|---|
| | | | | TANF, CCDF, Head Start | Tax Subsidies | | Universal, Low-Income, or Employed Parents Only | Quality Considered | |
| Blau (2001) | Yes | Yes | Reallocates replaced program funds. | All | All | Proposes to eliminate TANF entirely. | Low-income parents | Yes, accreditation subsidized, parent subsidy higher for child care of greater quality. Highest quality child care free to parents. | Incentives for providers to offer and parents to select quality child care built into system. |
| Helburn and Bergmann (2002) | Yes | Yes | Both | CCDF modified under one scenario, replaces CCDF for 4-year-olds under second. | DCTC replaced under two scenarios | Copayment set at 20 percent of income above poverty line. | Low-income and universal—varies by scenario. | Yes, bonus payment to providers who meet standards. | Unique copay structure |
| Georgia Voluntary PreK (lottery funding) | No | No | No | No | No | Free to all participants. | Universal | Yes, requirements set by state. | Lottery funding. Free, fully universal plan. |
| Sawhill and Thomas (2001) | Yes | Yes | No | No | No | | Low-income | No specific focus on improving quality. | Focuses on poverty alleviation. |
| Sawhill (1999) | Yes | Yes | Surplus | No | No | Means tests the child care tax credit—cap at $60,000, reallocate savings. Increases block grants to states to allow for flexibility. | Low-income | Yes, focuses on accreditation: tax credits available for accredited providers only. | |

(table continues)

**Table 2, continued**

| Proposal | Sliding Fee Scale | General Revenue Funding | Surplus or Reallocation | Replaces Existing Subsidies | | Other | Non Financial Policy | | Strengths / Unique Features |
|---|---|---|---|---|---|---|---|---|---|
| | | | | TANF, CCDF, Head Start | Tax Subsidies | | Universal, Low-Income, or Employed Parents Only | Quality Considered | |
| Vast (2001) | Yes, though indirect via eligibility for financial aid based on a modified value of AGI. | Yes | No | No | No | | Low-income parents | Yes, community centers that provide financial aid monitor quality and provide information on its benefits to parents. | Improved measurement of ability to pay via financial aid system. |
| Wolfe and Scrivner (this paper) | Yes, via tax system, though payments for upper income parents are capped. | No | Reallocates replaced program funds. | CCDF, HS, TANF child care | Yes, all child care oriented tax subsidies. | Based on increasing average tax rate for participating families. | Universal | Yes, federal minimum level, state option to increase. | Self-financed proposal with options for states to increase funding levels and quality if desired |

EITC benefits, and child care expenses. Given this information, the authors can change policy parameters and estimate the change in predicted wage among nonworking heads.

By assigning all such heads a probability of working using a simulation approach identical to that for predicting hours worked, the authors use an estimated elasticity of 0.7 to recalculate a head's probability of working given the change in earnings that a policy brings about. Finally, the authors take the average of the new probabilities, which they assume approximates the participation rate, and randomly assign nonworkers to work until the correct number of labor force entrants have been drawn.

Sawhill and Thomas use the above methodology to estimate the effects and costs of several alternative child care policies with the dependent care tax credit as a baseline. First, they simulate the effects of a universal preschool program for 4-year-olds by reducing family child care expenses by the proportion of family children that are 4-year-olds.[22] As the authors note, this estimate will likely underestimate the true cost of the proposal if the cost of caring for 4-year-olds exceeds the average cost for all children under age 12. It may also be the case that the average cost of an education-based child care system exceeds that of the current child care system for 4-year-olds. Although the authors do not present the number of children estimated to participate in this system or per child costs, they estimate that the marginal cost would be approximately $4.8 billion and that the universal prekindergarten program would result in a marginal reduction in the 200 percent poverty gap of approximately $1.8 billion.

The authors also explore the effects of making the DCTC fully refundable, and find that doing so would result in marginal costs of $1 billion and reduce the 200 percent poverty gap by $1.2 billion. If DCTC refundability is combined with an expansion that would increase the DCTC credit rate from 30 percent to 50 percent for families with incomes up to $30,000 and then scaled down to 20 percent by $60,000, the marginal cost increases to $3.2 billion and the marginal reduction in the poverty gap is $3.6

[22]The authors assume that only families using paid child care will be affected by this proposal. As they suggest, if those not currently using child care elected to participate in a universal prekindergarten program, costs could be substantially greater.

billion. Recall that these programs target children under the age of 12, not just 4-year-olds as does the universal prekindergarten program; if we uniformly distribute costs across ages, the marginal cost for 4-year-olds would be approximately $100 million.

Finally, Sawhill and Thomas construct and estimate the effects of a new child care subsidy plan in which they propose to cover all child care expenses until the 100 percent poverty gap reaches $0. As family earnings increase beyond this point, benefits would be subject to a 20 percent phase-out rate until the total subsidy amount completely phases out. They suggest that this subsidy could be administered either as a refundable tax credit or a voucher system administered through the CCDF program. The estimated marginal cost for this phased-out subsidy approach is $14.2 billion and the corresponding reduction in the poverty gap is $11.6 billion. This policy also does not target only 4-year-olds and again assuming a uniform distribution of costs, marginal costs for 4-year-olds would be approximately $970 million.

*Discussion*

Sawhill and Thomas have assembled a very reasonable simulation approach, particularly with the use of SIPP to simulate mode choices. Given changes in child care subsidy policy and state provision of ECE in recent years, however, using more recent SIPP data, when they become available, would be a marked and interesting improvement.[23] It is also important to note that if parents lack skill in identifying, or choose not to select, quality child care, tax credits and some subsidies may not provide a better child care experience for children. As we later describe, Blau (2001) addresses this issue and suggests several mechanisms for creating incentives for parents to choose, and child caregivers to provide, child care of higher quality.

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[23]The 1996 SIPP panel includes child care topical modules in waves 4 and 10, the latter of which is scheduled to be released soon and covers April through July of 1999. These data will provide vital updated information on current patterns of child care use.

Sawhill (1999)

*Proposal Description*

In an earlier report, Sawhill (1999) also suggests limiting the child care tax credit to families with more modest incomes, which she proposes to define as less than approximately $60,000, and extending aid to others based on a sliding fee scale, as described above. Sawhill also presents several alternatives such as a gradual expansion of Head Start and Early Head Start to cover a larger proportion of the population and provide ECE on a full-day basis. She estimates that if approximately $8,000 were made available per child for children from poor families, the program would cost approximately $7.3 billion compared to the $3 billion spent on 4-year-olds under Head Start in 1999.

In addition, Sawhill suggests that allocating federal funds to states could provide valuable flexibility and targeted spending on training and infrastructure, but suggests that accreditation standards be required to ensure that child care and education are properly delivered. As an alternative, tax credits or vouchers could be expanded, giving parents more control over what services were developed. This option would need to be tempered with policy to improve parents' ability to discern quality child care and understand the benefits thereof.

*Discussion*

The aforementioned policy proposal represents a workable adaptation of current policy and reform. With regard to the proposed funding channels, if parents are not skilled at identifying quality child care or are not informed of the benefits of quality child care, the latter could have a less desirable effect. Sawhill estimates that a high-quality, 2-year program that fully subsidizes the cost of child care could cost up to $30 billion, or $18 billion more than 1999 spending levels. At the time, she suggested devoting a portion of the budget surplus to ECE, arguing that investments in education have excellent rates of return in the long run. In the current budget environment, such a strategy is much less feasible, and policymakers must look elsewhere for the funds to back such a program.

Vast (2001)

*Proposal Description*

Vast (2001) presents a variety of proposals, all adapted from the current means of funding higher education, including developing a financial aid system for parents of children needing ECE, low-interest loans, and endowment-based funding. We discuss each of these below.

*Financial Aid for ECE.* Vast first investigates the extent to which financing methods currently used in higher education could be adapted to finance ECE programs. Vast first proposes using a financial aid system similar to the system available for higher education. The proposed ECE financial aid system would share many similar features, but would incorporate a need analysis system modified to account for differences between the financial circumstances of parents with young children and those with college-age children.

Briefly, the financial aid need analysis compares the price of child care to the expected family contribution, which is a function of family income, assets, family size, and other factors, and calculates aid as the difference between the two. Vast proposes to define income as federal adjusted gross income, but would disallow adjustments that do not affect ability to pay and would include Social Security, child support, and other sources of income not currently included in AGI. Several allowances could then be subtracted from this base income, including expected tax burden, medical and dental expenses, an adjustment for the number of earners in the family, a base level of income below which a family has little ability to pay (suggested as 140 percent of the federal poverty line), and an amount equal to a desired level of savings for higher education later in life (suggested as 1.8 percent of annual income).

After adjustments have been made, Vast proposes to set parent contribution using a system of marginal tax rates similar to the current federal structure—the first dollars of discretionary income are subject to a low tax rate, while later dollars can be taxed at up to 47 percent. The difference between this contribution and the price of child care would then be distributed as aid. A similar procedure would be

used to account for asset holdings, and the parent contribution would be defined as a function of adjusted asset levels. Vast designs the need assessment process to adjust for the number of children in child care by reducing the proportionate expenditures as more children need child care. If two children seek aid, for example, the expected contribution for the second child would be set at 60 percent of the level for one child.

The proposed ECE financial aid program would be made available locally through community-based centers that would serve similar functions to college financial aid offices. In addition, Vast suggests that these centers might provide information about the benefits of ECE, identify other sources of aid from which families could draw, identify providers that meet program quality standards, and handle other administrative functions such as handling applications and distributing awarded aid to providers chosen by parents.

*Low Interest Loans*. In a separate chapter in Vast's report, Davis explores the usefulness of providing long-term, low-interest loans for ECE, similar to the arrangements currently available for postsecondary education. To assess demand for such loans, he convened focus groups consisting of moderate- to upper-middle-income families and gathered feedback on participants' willingness to participate in such a program. The scenario presented to participants described child care of high quality and findings suggested that parents in the focus group were not willing to pay more than they did in their current arrangements, even if loans were available to those who did so (no information was provided on just how much the hypothetical program would cost). Providing information about the benefits of ECE might change this willingness to participate if, as it seems, parents currently underestimate the developmental effects of ECE. Unwillingness to participate in a loan program was also linked to previous frustrating experiences with college financial aid programs. Davis suggests that parents would require an interest rate of between 6 and 8 percent to participate at all, suggesting that the program would likely need to be subsidized.

Arbitrarily assuming that 20 percent of families with income between $60,000 and $100,000 would participate, Davis estimates that approximately 313,000 families would participate with an annual loan volume of $1.5 billion if the average annual loan amount was approximately $4,800. The author again notes that these loans would likely have to be subsidized and guaranteed to ensure interest rates low enough to elicit participation.

*Endowments*. Because institutions of higher education receive nontrivial revenue from endowment funds, Vast also explores the feasibility of creating community endowment funds for ECE. In assessing feasibility and revenue raising capacity for such an endowment, Vast notes that in higher education it is common practice to spend 5 percent or less of the total value of the endowment on an annual basis. To illustrate the potential, if a community has ten centers for which it wishes to provide $50,000 of support annually, it would need an endowment of approximately $10 million to do so and stay within commonly accepted distribution practices.

*Discussion*

Vast's package of program postsecondary education financing features that could be adopted for ECE programs has some components that are promising, as is the focus on increasing awareness of the positive beneficial effects of quality child care. The proposal does not, nor does it intend to, address the issue of required funding levels, the sources from which funds might be obtained (including the share for which parents would be responsible), or potential political feasibility.

With regard to the components described above, Vast's financial aid proposal is interesting in its focus on using a more completely defined means of assessing financial need, as are the scope and means of funding the financial aid package itself. If such a program were feasible, it would benefit from having little stigma attached to receipt of aid—the current college financial aid system has little if any stigma and parents would likely view financial aid for ECE in a similar manner.

The low-interest loan strategy as described above is worthy of further investigation to determine parent willingness to participate in a loan program assuming current costs of child care. As Davis suggests, a low-interest loan program could be a helpful tool for helping parents to choose quality child care during a time when the expense might otherwise exceed family resources. However it is also important to note the difference between loans for higher education which are the obligation of the recipient of the loan—the student—and these proposed loans which would be the obligation of the parent(s). We would also recommend gathering additional information on parents' willingness to participate. The results in this proposal come from five small groups and might bear more representative results if the loan proposal were presented separately from greatly increased cost of ECE, or with a description of the benefits of ECE.

With regard to endowment funding, as Vast suggests, lack of available data makes it difficult to assess the extent to which the typical sources of endowment funding—alumni, businesses, and foundations—would be willing to contribute to a community-level ECE endowment. Given the emphasis on community-level funding, one must also wonder whether funds will be available where they are most needed. Field-of-interest endowments, which could allocate benefits over a much larger group of ECE providers, could be a more promising source of assistance to low-income children and might (or might not) attract more donors. Although our understanding of the promise of endowments for ECE is quite limited, the author's argument for more work in the area is well made.

The loan (as specified) and endowment components seem less feasible than the use of a formula based on an adjusted AGI to determine required parental contributions.

Blau (2001)

*Proposal Description*

Blau (2001) advances a four-part proposal for a reformed system of ECE and family supports that would leave little of our current system in place. As a first step, he suggests providing a means-tested

child allowance which could be administered as a refundable tax credit. As such, the allowance could be spent, according to parent preferences, on ECE or other items. Under this plan, the allowance would be structured so that families below the poverty line receive $5,000 per child for up to two children, with benefits then decreasing with additional family income and phasing out completely at 400 percent of the poverty line.

Blau also recommends subsidizing the cost that child care centers face when seeking to become accredited. By doing so he suggests that we could provide additional incentives for ECE centers to provide quality child care that might otherwise be too costly to provide if parents are not skilled at discriminating, and hence choosing, high quality providers. Blau suggests two levels of accreditation, one for extremely high quality child care and a second for lower, but still good, quality, where this lower level would provide a means for centers unable to meet the highest standard to nevertheless make improvements and be recognized for this effort. A means-tested child care voucher with value set as a function of the provider's quality level would then complement this policy and provide additional incentives for parental selection and center provision of higher quality child care. As examples, Blau suggests that a family receive a voucher equal to 30 percent of the average cost of unaccredited child care, 60 percent for ECE of good but not excellent quality, and 100 percent of the average cost of excellent child care.

Finally, Blau recommends engaging in a campaign to both make parents aware of the developmental benefits of high quality ECE and provide guidance in identifying and selecting quality providers. To do so, he suggests providing an informational booklet and video that would be provided by hospitals to mothers when they are discharged following the birth of a new child. In addition to providing the aforementioned information, the packet would contain contact information for local referral agencies.

The above system is designed as a replacement for the current federal system of ECE subsidies including CCDF, the DCTC, and other tax provisions designed to provide relief to parents. Head Start would be integrated into the above program. Blau also proposes to eliminate Temporary Assistance for

Needy Families (TANF) under his proposal, as he argues that his combination of programs meets the same basic goal—providing assistance to needy families with children. If policymakers desire programs that encourage employment, he acknowledges that other programs would have to address this need.

Blau estimates the cost of his proposal using the above policy parameters and several assumptions. First, if the child allowance was set at $5,000, $3,500, and $2000 for children from birth to age 17 from families with incomes less than 100, 200, and 400 percent of the poverty line, respectively, he estimates that annual costs would be approximately $131 billion. Blau next suggests that the value of the child care voucher would be set at $6,000 for excellent quality child care and reduced as described above for child care of lesser quality. Blau then notes that few data are available on the distribution of child care used by provider quality and thus makes the admittedly arbitrary assumption that 65 percent of eligible children would use excellent quality child care, 15 percent would use good quality child care, 10 percent would use unaccredited child care, and the remaining 10 percent would use no child care. Under these assumptions the cost of the vouchers, which would be available to parents of children aged 0 to 12, would be approximately $75 billion. He estimates the combined cost of the accreditation and information program at $110 million, for a total program cost of approximately $207 billion.

These costs under the proposed plan compare to $111 billion in program expenditures under the current programs, which Blau proposes to eliminate. He notes that high-income families with children stand to be adversely affected by the policy but notes that such families could nevertheless afford quality child care and that providing universal eligibility would make the costs of the proposal prohibitively large.

With regard to implementation, Blau recommends that vouchers for ECE be administered and delivered by the IRS, which could calculate vouchers as a function of the previous year's tax return and make needed adjustments based on the next year's tax return.

*Discussion*

Blau designs his proposal to provide flexibility and support to parents of children by working within the market for child care, but builds in incentives aimed at increasing child care quality and a consumer/parent information program designed to address one of the problems in this market, imperfect information. He emphasizes that the estimated costs are approximations and that our further dissection of them as applicable to 4-year-olds does little to add to the extent to which these costs will approximate actual program costs. Nevertheless, Blau's focus on providing incentives for parents to choose quality child care through increased awareness of the developmental benefits of ECE is well received. As with all information dissemination programs, the question remains—will parents be receptive to and affected by such a program? The answer is not clear, but it is one that could be easily addressed by a modest demonstration.

In terms of the method of administration, the IRS rarely serves such a function. An exception was the collection of supplementary taxes, calculated on federal income tax liability, of the Medicare Catastrophic Coverage Act (PL 100-360), which was passed in 1988 but repealed one year later after higher-income Medicare beneficiaries protested new premiums.[24]

Helburn and Bergmann (2001)

*Proposal Description*

Helburn and Bergmann (2001) present a model of reforming the nation's child care system that includes several scenarios, ranging from expanding funding so that it is sufficient to serve all children eligible under the current CCDF program, to providing universal and free child care of higher quality to all children. The authors describe program parameters and simulate costs under each program using CPS

[24]The surcharge ("supplemental premium") was set at an annual rate ($22.50 in 1989) for each $150 of federal income tax liability up to a maximum ($800 in 1989) for each Medicare-eligible taxpayer. The surcharge was not tax deductible, could not be treated as an itemized medical deduction, and was considered a tax for estimated tax purposes (but not for purposes of any tax credits or the alternative minimum tax).

data and cost information from a variety of sources. Data from the March 2000 CPS allow the authors to make use of individual-level data to assign need for child care based on parent labor force participation and welfare recipiency. By using this data set, the authors can also incorporate the assumption that an arbitrary percentage of parents not currently working would return to work when affordable child care becomes available. The authors simulate the effect of labor force re-entry on the copayment revenue, which is an important means of financing in their improved quality child care scenarios. We describe their approach below.

The authors design their first proposal to serve as an interim model that aims to provide child care to all children currently eligible for funding under CCDF. To compute costs for this program, they use Iowa's set of fees paid to child care providers under CCDF and parent copayment requirements, which they note have a structure that closely matches the national average. Under these rules, families cease being eligible for CCDF assistance once income rises above a certain level ($25,764 for a family of three with two children), at which point the family would lose approximately $7,000 in CCDF funding—a substantial notch.

Helburn and Bergmann also make several assumptions about program take-up rates. In the first case, all children currently in paid child care would use benefits, as would 60 percent of welfare families that do not currently require child care (they intend to capture welfare recipients who would return to work if child care were available—the proportion is arbitrary). The authors then introduce two additional scenarios in which one-third or two-thirds of the parents of children currently in unpaid child care (including child care provided at home by a family member) would enter the labor force and use CCDF-funded child care.[25] For both these cases and the welfare leavers, the authors simulate earnings using predictors from the sample of previously working mothers using age, number of children, and education as RHS variables. They then use predicted earnings to determine the appropriate copayment.

[25]They cite the 80 percent take-up of universal prekindergarten in Georgia as evidence that these scenarios are plausible. They do not note that, unlike this program, Georgia provides child care at no direct cost to parents.

To assign participation, the authors use data from the 2000 March CPS and use the following rules:

1. If the family mother is in the labor force or the family has only one parent, then the family requires child care.

2. Children in families that require child care are randomly assigned to different provider types using the distribution of child care observed in the most recently available (1994) census data.

3. If either parent reports not being in the labor force, then in-home child care is assigned.

4. Half-day or full-day child care needs are determined by the number of hours that the mother works.

5. Required copays are calculated using family income, where earnings are imputed separately for welfare leavers and families assumed to re-enter the workforce and to need child care.

6. The authors run two models, one in which they include only children currently needing child care, and another in which they include all eligible children. The authors report that they then interpolate the intermediate cases of one-third and two-thirds take up (and 60 percent participation of welfare recipients) from the two extremes.

Using this logic, Helburn and Bergmann estimate costs and copays for children from birth through age 12, but do not report revenue raised through parent copayments for 4-year-olds. Under the assumptions of take-up among only those children currently requiring child care, one-third of the remainder, and two-thirds of the remainder, they estimate that the total cost to the federal government would be $2.7B, $3.4B, and $4.1B with the programs serving 0.7 million, 0.8 million, and 1.0 million 4-year-olds, respectively. Copayments would reduce the total costs for all children by 13 percent and would likely reduce costs for 4-year-olds by a similar proportion.

These cost estimates do not include reductions in the dependent care tax credit or account for the fact that Head Start currently serves some of the targeted children, both of which suggest that their values overstate the true costs. They also assume that the need for facilities and transportation will remain unchanged.

Helburn and Bergmann extend their interim proposal by suggesting that the government provide subsidized child care to all families, with copays set at no more than 20 percent of a family's income in

excess of the poverty line. Under this case, families would be eligible without respect to income, but fees charged to participating families would be set as:

minimum of: [0.20 * ( Family Income – Poverty Threshold )] or provider standard fee.

They also propose that the federal reimbursement to providers be set at the weighted national average annual fee paid by parents. Citing the Cost, Quality, and Outcomes (CQO) study, they suggest that this would provide a level of child care somewhere between "minimally adequate" and "good." The authors also incorporate a $2,000 bonus to providers offering good child care, and randomly award this bonus in 24 percent of cases. This bonus is designed to reflect the CQO finding that centers would have to increase costs by approximately $2,000 if they increased the wages of center employees to match market wages for workers with comparable experience and education. They base the 24 percent assignment rate on the proportion of "good" preschool care observed in the CQO study.

Using a similar approach to that used for their first proposal, the authors report costs to the federal government and number of children served under the three respective participation scenarios as $5.6, $7.7, and $10.0 billion and 1.1, 1.6, and 2.0 million 4-year-olds. If the proposal is changed to include universal child care with no parent copays, costs increase to $8.5, $11.9, and $15.4 billion for 1.8, 2.4, and 3.1 million 4-year-olds, respectively.

Helburn and Bergmann thus estimate that the annual costs of providing ECE services to 4-year-olds under their proposal would be approximately $2.0 to $11.9 billion depending on whether (1) the current system of child care is expanded to serve all children or (2) a new system of improved quality child care is made available to parents, with or without copays.[26] Under the improved quality scenario, the

[26]When considering these costs, the reader should bear in mind that the Helburn and Bergman proposal is designed to affect children aged 0 to 12. We have focused on costs for 4-year-olds only. A policy that targeted 4-year-olds only might affect labor force re-entry as some parents would have other children still in need of child care. If home child care for these other children were the preferred or constrained option, then re-entry would not be a

cost estimates are based on the assumption that average per-child costs for 4-year-olds under a free, universal child care would be approximately $5,000.[27]

Helburn and Bergmann discuss possible funding sources and begin by suggesting that states would be unlikely to be able to raise the needed funds, even where the will to do so was strong. And even if some states had success in funding such a program, child care availability and quality in many other states would remain constant. They suggest that funding come from federal sources, whether the ultimate mechanism is taxation, reallocation of current funds, or appropriation from any future budget surpluses. Although the authors note that re-allocation of funds from existing programs brings the political problem of creating new opponents of the new system, they suggest taking a close look at the benefit-to-cost ratios of several current federal programs, including the $32 billion spent on farm subsidies and $56.6 billion of forgone tax revenue for the deductibility of mortgage interest on owner-occupied homes. These examples are illustrative of both the level of spending on other programs that might be dedicated to child development and of the political difficulty of re-allocating funds in a case where there are clear, and politically vocal, groups that stand to be harmed by such a decision.

The proposed copayment structure is quite reasonable in the sense that, as the authors discuss, it ensures that family income would not be driven below the poverty line because of child care costs. The 20 percent that the authors suggest could, of course, be adjusted to meet program needs and citizen and parental preferences regarding program quality and income redistribution.

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good option, as it would be if all children were offered out-of-home child care.

[27]As described, the authors present a model of reforming the nation's child care system that includes several scenarios, ranging from expanding funding so that it is sufficient to serve all children eligible under the current CCDF model, to providing universal and free child care of higher quality to all children. The estimated per-child costs reflect the latter scenario and the additional assumption that approximately 25 percent of child care would be provided in higher than average quality settings (ECERS score of 5 or greater).

*Discussion*

Helburn and Bergmann present an interesting policy proposal and cost estimation methodology. Like the simulation approach used by Sawhill and Adams, this proposal would benefit from more recent data from the child care topical modules from the 1996 panel of the Survey of Income and Program Participation. Not only would these data allow for more accurate modeling of the use of the postwelfare reform systems of child care in the United States, but they would allow the authors to expand their simulation methodology to better model the determinants of child care type used, rather than basing estimates on a simple distribution of child care. We also recommend that single and married fathers be treated similarly to mothers in terms of labor force re-entry. Under the authors' current logic, single fathers not currently in the labor force do not have the option of entering the labor force under the policy change. Our biggest concern with the financing aspect of their proposal is the need for substantial new funds from the federal government and the authors' suggestion that these be reallocated from existing programs.

Brandon, Kagan, and Joesch (2000)

*Proposal Description*

Brandon, Kagan, and Joesch (2000) describe their simulation approach, currently under development, that will allow them to gauge the effects of a number of policy and market parameters on the cost of providing universal child care that is affordable for families. The model will allow the authors to vary the cost of child care itself to reflect changing market conditions and policy requirements and to test the effects of different financing techniques including tax policy, subsidies to providers or parents, loans, and grants. It is also designed to predict and incorporate demand for ECE and account for changes in labor force participation that policy reforms may bring about.

*Discussion*

Although detailed descriptive results from this project have not yet been released, the results from the Financing Universal Early Care and Education for American Children projects promise to be a welcome and needed addition to the ECE financing literature.

As we described earlier, many of these approaches, each interesting and innovative in different ways, share a common trait—a neutral or missing stance on the sources from which funds for the proposal are to be drawn. Perhaps this neutrality is a recognition of the need to tailor funding streams to the political needs at the moment an ECE bill is brought to the table. It may also reflect the recent history and fate of child care and ECE bills in the face of the diminished federal budget surplus, most recently illustrated by the House's passing of the welfare bill (H.R. 4737) with $2 billion in additional funding for child care over 5 years, down from the $11 billion increase over the same period originally proposed as a reasonable counterpart to increased work requirements (Pear, 2002). In the following section, we address the need for clear and viable funding sources by presenting a proposal which we believe could both provide quality ECE to our nation's 4-year-olds and do so without overreliance on general revenue as a funding source.

## VII. OUR PLAN

As we see it, the United States needs a reliable system for financing preschool education for 4-year-olds. The system should not be too burdensome for lower-income parents, should recognize that preschool is an investment in children's human capital that has both private and public benefits, should be fairly easy to administer, and should contribute sizable amounts of money toward financing a universal program.

The best alternative would be to expand elementary school education to 4-year-olds and add an extended child care component, an expansion that builds on models similar to those that we earlier

describe as being based on the elementary education system currently under way in the District of Columbia, Oklahoma, and Texas. This approach would be financed by an expansion of existing sources of revenue for public schools such as property taxes and general revenue. The advantages of this approach are clearly simplicity, little added administrative cost, and the ability to get started quite quickly. The disadvantages are the potentially higher costs of the program if it is combined with public schools, including union restrictions that may prevent or restrict the hiring of aides at lower salaries than teachers, the potential difficulty of raising more revenue from existing sources, and the failure to address the extent to which parents of 4-year-olds should share in the cost.[28] Another disadvantage may be greater difficulty in making the preschool program a year-round program. Finding space in current educational facilities may also be a considerable challenge in many communities, especially in light of the initiatives to reduce class size currently under way in settings into which we would hope to bring the prekindergarten program. Some individuals might be willing to make a trade to offer a program that includes prekindergarten and ends at grade 11 in districts in which adding an additional year is not possible, but we do not pursue this idea here. We do however, wish to note it as a possible option.

As an alternative, we suggest the following financial approach, which makes use of the federal tax system. We developed this proposal with two policy goals in mind. First, we sought to design a program that could provide the developmental advantages of good quality ECE to all 4-year-olds. Second, in recognition of the reliance on general revenues in other proposals, we wished to design a proposal with a specific financing mechanism that could be used to support the program. In recognition of the current budgetary necessity to keep program costs down, we sought to include parents in the costs, but do so in a way that reflected parents' ability to pay. As we present below, our scheme has the advantage that it could

[28]As we see it, the issue of teacher pay scales is one defined in terms of paying assistant teachers. Using the existing pay scale for the lead teacher in each pre-K classroom is consistent with desired quality child care. However, using assistants who have less formal training is likely to be cost-effective, and such workers are likely to have market wages considerably below the existing teacher pay scale.

be easily modified to (1) increase the revenue generating capacity and (2) be expanded in states that wished to enhance their preschool program.

The basic idea is to finance a major share of the cost of a universal preschool program for 4-year-olds by having parents contribute according to their ability to pay as measured by their average federal tax rate over a 10-year-period. One might think of this as increasing the average tax rate of parents of each 4-year-old for a multiple-year period. If we use the tax system's progressive rates as the basis of payments, parents with lower incomes and lower taxes will pay less for preschool than will higher-income parents. For the lowest-income parents, revenue will be raised by a reduction in the subsidy rate of the Earned Income Tax Credit (EITC). In our plan we cap the amount that parents would pay so that we would attract the children of higher-income parents as well as children of middle- and lower-income parents.

Here are the parameters we use to illustrate our plan:

1. Calculate an increase in the average tax rate by 1 percentage point for parents of 4-year-olds who are enrolled in the preschool program.

2. Reduce the EITC subsidy by 2.5 percentage points (from 40.2 to 37.7 percent) for parents of 4-year-olds enrolled in the preschool program.[29] This would reduce the maximum EITC benefit from $3,816 to $3,579. We allow EITC benefits to phase out completely at the current amount, but because we reduce the maximum benefit, the new effective phase-out rate decreases to 19.5 percent. Other parameters of the EITC remain as they are.

3. A family would face either a payment calculated according to their federal average tax rate or based on a reduction in their EITC payment. In any year, their payment would be calculated via one of these channels.

4. Parents who sign up for this program would not be eligible directly for CCDF funds for this child during the year the child is in the preschool program, nor would parents be eligible for the Dependent Care Tax Credit for this child for expenses incurred for the 4-year-old's preschool program (for parents who do not enroll their child in the program, only costs for child care above the average costs of the program would be eligible for the Dependent Care Tax Credit or any other tax subsidy directed toward child care or preschool).

5. Payments would be made over 10 years; the cap or maximum payment per year would be $800. This cap is designed to limit the amount contributed by families with greater incomes, to provide more incentive for them to participate. In addition, parents would pay a one-time annual fee of

[29]Under this scheme, approximately 630,000 parents receiving EITC would shift to face an increase in their federal average tax rate.

$150 if their income were less than $35,000, but double that, or $300, if their income were above $35,000.

Using a 3 percent real discount rate, this plan would raise $4,624 per child using the 2000 income distribution (Committee on Ways and Means, 2000). So, for example, if 85 percent of all 4-year-olds were enrolled, and the probability of enrollment was uniform across income groups, our plan would raise $15.43 billion dollars. If family income increases over the 10 years, then the amount collected per child would increase. Calculated according to taxable income categories, the annual amounts collected per child via this system would range from $125 for those in the lowest income group to the $800 maximum.[30] In terms of net present value of the 10 years of payments, the amount would range from $1,066 to $6,824. The full set of the additional amounts collected is given in Table 3.

We also simulate the revenue raising capacity of our approach using data from the March 1999, 2000, and 2001 Current Population Survey.[31] Doing so allows us to improve upon the above estimates of the distribution of employed parents by income class by looking at income among families of 4-year-olds rather than all families. Using CPS data also allows us to obtain estimates of the proportion of all 4-year-olds that live in a family with any working parent, as well as those living in families where all parents work.

We find that of a total of 3,926,300 4-year-olds, 85.7 percent (3,363,900) have at least one employed parent and 56 percent (2,201,600) live in families where all parents work.

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[30]We also estimate the increase in taxes paid under our plan as a percentage of tax payments made under the existing tax structure. Using effective tax rates as provided by the IRS (2001a and b), we estimate that total taxes paid as a percentage of income increase by 2 to 11 percent (excluding the change for the $25,000 group, which faces an average tax rate quite close to zero), with higher-income individuals facing the smaller increase because of our $800 expenditure cap. Note that the average tax rates reported by the IRS are either computed over all returns (non-EITC cases) or for married couples with two dependents (EITC cases) and may not reflect the actual rates faced by parents of 4-year-olds.

[31]We use 3 years of data to maximize the available sample of 4-year-olds. We increase the sample to approximately 5,700 4-year-olds from less than 2,000 in each individual year. We adjust CPS person weights to reflect the number of 4-year-olds reported in U.S. Census Bureau (2002), which is based on the 2000 census, and divide each weight by three to reflect the fact that we are using three years of data. Like the estimates using data from the Committee on Ways and Means (2000), the 1 percentage point increase in average tax rate is applied to total family income.

**TABLE 3**
**Parameters of Wolfe-Scrivner Proposal for Financing of Universal Preschool for 4-Year-Olds**

| | Mean Earnings of Income Group† | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | $ 5,000 | $ 15,000 | $ 25,000 | $ 35,000 | $ 45,000 | $ 62,500 | $ 87,500 | $ 150,000 | $ 200,000 |
| Annual tax increase | $ 125 | $ 205 | $ 250 | $ 350 | $ 450 | $ 625 | $ 800 | $ 800 | $ 800 |
| NPV of increases | $ 1,066 | $ 1,749 | $ 2,133 | $ 2,986 | $ 3,839 | $ 5,311 | $ 6,824 | $ 6,824 | $ 6,824 |
| Avg. tax rate | -40 % | - 24% | - 0.6% | 8.9% | 10.0 % | 11.1% | 13.7% | 17.4% | 24.0% |
| Tax increase as % of income | 3 % | 1.4 % | 1% | 1% | 1% | 1% | 0.9% | 0.5% | 0.4% |
| Tax increase + fees as % of income | 5% | 2.4% | 1.6% | 1.9% | 1.7% | 1.5% | 1.3% | 0.7% | 0.6% |
| % of all 4-year-olds | 6.8% | 9.2% | 10.6% | 11% | 10.9% | 23.8% | 13.1% | 11.5% | 3.1% |
| % of 4-year-olds with all parents employed‡ | 7.3% | 12.4% | 12.0% | 11.6% | 10.5% | 21.3% | 11.4% | 10.9% | 2.7% |

**Notes**:
† Except as otherwise noted, distribution based on 2000 *Green Book* data, and tax data from the IRS.
‡ Based on CPS data averaged over 1998, 1999, 2000.

By incorporating the income distributions for these two groups we can recalculate our total revenue raised and per-child spending capabilities. If all 4-year-olds from families with any employed parent participated, our proposal would raise $15.0 billion, or approximately $4,400 per child. If we look only at those 4-year-olds from families where both parents work, those most likely to currently require child care, we estimate that our proposal would yield approximately $9.7 billion, or $4,392 per child.

In addition to these resources raised from parents, we would also apply the added revenues currently subsidizing child care for 4-year-olds to this program. These would include the funds from Head Start for this age group, the funds from CCDF and TANF again for this age group, and the value of the tax expenditures incurred under the various tax credit policies including those paid to employers. Our estimate above is that these currently provide about $6.4 billion.

Would high-income families enroll in this proposed plan at this "price?" We do not know, but we note with interest that the average cost of child care for affluent families in 1998 has been estimated to be very close to the value of $6,824 (Sawhill and Adams, 2001). This, of course, could be for more than one child. We also note that this average cost faced by affluent families is just that—an average. The cost of extremely high quality child care may be substantially greater for those families who both prefer and can afford such child care. As we describe below, however, the revenues generated by our proposal fall near the range of costs that one might expect for good child care as measured by the Early Childhood Environmental Rating Scale (ECERS), and parameters could be changed to reflect willingness to pay for child care of increased quality.

As noted above, the system could be quite flexible and readily modified to change the revenue stream.[32] For example, if the one-time fees were raised to $400 for those with incomes over $35,000, the amount raised per child would increase to about $4,700. A further increase in the price by 0.1 of a

[32]This refers to the flexibility of the scheme rather than to political ease.

percentage point of the average tax rate would raise the amount available per child to $4,921. Parameters might be varied to meet specific needs, including preferences for very high quality child care.

Thus, this ability to pay approach to providing for universal preschool would cover the average variable costs of a quality program. The goal would be to provide enough resources for at least a "good program."[33] Although it is difficult to assess whether the quality that such a funding level could provide would be excellent, good, or adequate, several studies provide some guidance. The Committee on Economic Development (2002) uses data from the Cost, Quality, and Outcomes study to examine average costs among the child care centers with ECERS quality ratings of 5 ("good" child care) and above. They find an average per-child cost of child care of $3.22 per hour (in 2001 dollars) in these high-quality programs and suggest that annual costs for a four-hour-day school-year program would be approximately $2,300.[34] Extending this estimate to a full-day, full-year program brings greater annual costs—up to $6,700 per child if we assume that a full 2,080 hours of child care are needed.

Marshall et al. (2001) investigate the quality and cost of child care in Massachusetts using data from a random sample of 88 community-based child care centers that served preschool children on a full-time, full-year basis. They authors find that process quality in Massachusetts, as measured by the (ECERS-R) scale, ranks as "good" quality, with an average score across categories of 4.94. By comparing this result to outcomes in four other states (which averaged from 3.82 to 4.49) as observed by Helburn (1995), they note that Massachusetts provides a relatively high quality of child care.

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[33]Georgia attempts to ensure a quality program by requiring that the lead teacher have an appropriate early education bachelor's degree; Ohio uses Head Start standards; other states subsidize the college education of their pre-K teachers.

[34]CED calls for their program to be funded in part by new federal revenues, not from funds shifted from other programs, but does not specify a financing source. They also suggest that the federal government should bear primary responsibility for children from families with income below 85 percent of SMI, with states funding care for the remainder of children.

The authors also collect data on center revenues and expenditures and find that average revenues per hour of child care were $3.71 and expenditures were $3.41.[35] By defining full-time, full-year child care as taking place for 45 hours per week and 52 weeks per year, they estimate average annual per-child center revenues of $8,681 and expenditures of $7,979.

We note that the state's average ECERS-R score is brought down by a relatively low score of 4.2 in the activities component. With this element, and others, it may be possible to increase quality by making that information on best practices available to center staff. Additional expenditures on labor or nonlabor components of child care centers may be needed to effect change. Marshall et al. conduct a multivariate analysis to test the relationship between quality and center costs and find no statistically significant relationship between costs and quality differences between centers receiving ECERS-R scores below 4.5 and those receiving scores between 4.5 and 5.5. The authors do find a positive and statistically significant difference in costs between lower quality (ECERS-R score < 4.5) and excellent quality (ECERS-R score > 5.5) child care, but do not report coefficient standard errors, making it difficult to assess how reliable the estimated 27 percent difference is as a point estimate.[36] As the authors note, it would be misleading to suggest that these estimates reflect the cost of improving quality because some lower-quality centers might not be able to achieve high quality even if they spent more, and others might be able to improve at little cost.

Gill et al. (2002) find that the Early Care and Education Program, an experimental initiative in Pittsburgh, was far more expensive; including capitol and administrative costs, the per-child cost for the full-time, full-year program was $13,612 in 1999. This high per-child cost largely reflects low

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[35]Revenues include parent fees, state and federal government subsidies, contributions from sponsoring organizations, and fund raising and foundation grants. Expenditures include labor costs (wages and salaries, as well as fringe benefits), rent or mortgage costs, food, and other costs including materials, maintenance, professional fees, advertising, and other miscellaneous expenditures. The authors also produce additional estimates that include estimated implicit costs of subsidized rent costs.

[36]The lesson from this multivariate analysis is not clear, largely due to the small sample on which the authors base their analysis.

participation in the project—during the time of greatest participation the project only served about one-quarter of the number of anticipated children. To put it another way, as Gill et al. point out, operating costs tended to be largely fixed, rather than variable, and therefore did not respond to the lower than anticipated enrollment rates. For these reasons we note that it is important to recognize that the per-child cost figure noted above should not be interpreted as representative of the average cost of high quality care, but rather should be viewed as an example of the high costs that underutilized sites may face.

With this much higher than expected price tag and lower than anticipated enrollment, the program ran out of funds early and is viewed as unsuccessful. The lessons that the Rand team that reviewed the project take from this is that the community-based program led to a very high proportion of communities overestimating demand for services and setting up brand new centers with very high quality, rather than working with existing centers to improve quality.

Other sources suggest that child care may be less costly. Schulman (2000) estimates that full-day, full-year child care for 4-year-olds ranges between $4,000 and $6,000. Helburn and Bergmann (2002) present cost estimates of an average per-child cost for 4-year-olds under a free, universal child care system at approximately $5,000.[37] As previously described, Georgia provides at least 6.5 hours of high-quality, universal child care to its 4-year-olds for the duration of the school year at a cost of approximately $3,500 per child. Extending such a program to meet a full-day, full-year schedule would likely result in costs in the upper end of the $4,000–$6,000 range.

Our proposal's revenue-raising capacity falls in the middle of this range; the savings from the current CCDF, Head Start, tax credits, and state funds currently used to meet demand for child care for 4-year-olds would add an additional $1,630 per child that could be available to increase quality or meet

[37]The authors present a model of reforming the nation's child care system that includes several scenarios, ranging from expanding funding so that it is sufficient to serve all children eligible under the current CCDF model, to providing universal and free child care of higher quality to all children. The estimated per-child costs reflect the latter scenario and the additional assumption that approximately 25 percent of child care would be provided in higher than average quality settings (ECERS score of 5 or greater).

other possible needs that we discuss below.[38] Under existing law regarding CCDF, funds from this source would only be available to children in lower-income families, meaning that these funds would be targeted to children from low-income families who, research has suggested, have the most to gain from high-quality prekindergarten programs. As we describe above, program parameters could be adjusted to increase the available per-child revenues, though discretion would be required to avoid setting repayment amounts too high and discouraging participation. We also expect that costs of quality child care under our program could be held in check if child care providers use an appropriate combination of teachers and aides rather than relying solely on teachers. This program is designed to serve both as a developmentally appropriate and educationally stimulating prekindergarten environment, as well as provide a work support for employed parents—activities conducted during the portion of the day designed to meet the latter objective will require fewer human resources (specialized elementary education training as opposed to child care training) than would a program designed to provide education for the full day. Adopting this approach would lead to lower expected costs than one observes in the elementary education setting in which teachers are the primary providers. States with populations that have preferences for even higher quality child care could also supplement program funding.

Additional resources might, for example, also be required if new facilities are needed or extensive changes are made to existing facilities, or to cover the cost of transportation. A portion of the savings from reduced use of other programs could be used to subsidize the program to provide for new facilities, as well as to improve the quality of child care as described above. We suggest that if policymakers design the program to support or encourage new facility development, they incorporate enforcement mechanisms and incentives designed to ensure that the facilities, an important component of the overall education experience, meet appropriate standards. A model such as that currently used by Georgia, in which the state both contracts with nonpublic community-based facilities, sets standards, and monitors performance

[38]Given an 85 percent participation rate, we estimate the total savings available for reallocation at $5.4 billion. Dividing by the number of participating 4-year-olds yields the per-child amount.

may be a useful model for other states to consider. These supplanted funds may be required to pay some of the average variable costs also if a smaller proportion of higher-income than lower-income families sign up for this program. We also note that, while difficult to estimate, this program will create administrative expenses. Although we expect that these expenses will be small in relation to overall program size, policymakers should budget for some such expenses, perhaps using data from the current IRS system, upon which our plan is based, as a guideline or from the college student loan program.

What about 4-year-olds living with single parents who do not work? Are they eligible? We suggest yes, since we are concerned with the well-being of children and there are externalities from having such children ready for school. Such parents would be required to pay the first-year fee and to agree to the payment schedule noted above. In lieu of other current payments, they would be required (subject to their ability) to provide some hours of work in activities such as food preparation, teacher's aide substitute, and so forth.

Implementation might have some aspects of state S-CHIP programs, in that states are given broad latitude as well as a set of requirements regarding the running of prekindergarten programs. States might use the state's department of education and the school districts to establish a program, administering the program under existing state-level child care departments, set up a new independent entity to run the program, or choose some combination of these. These organizations could also be charged with monitoring the quality of child care, for which the threshold would be set at the federal level or higher if the state's citizens prefer higher quality child care. Under this system, the agency collecting the funds would transfer funds to the state's prekindergarten entity while the parents of 4-year-olds enrolled would have a voucher or receipt from the agency to use to enroll their child or children in the program. We propose a federal collection agency rather than state administration to allow for greater ease in tracking families that move between states. As described above, states maintain considerable flexibility to define program quality at higher than baseline levels and supplement parental base of funding to meet the needs of their constituents.

To this point we have presented our proposal as largely a modification to the tax system; as such the IRS might serve as the collection agency since this would require no new agency and the ability-to-pay system is tied to the tax system. In this arrangement, the IRS administrative system could be modified to track participation, distribute payments for child care, and later track and collect parent payments. Alternatively, an office could be set up in either the Department of Education or the Department of Health and Human Services to serve as the agency for collecting and distributing payments. As a second distinct option, perhaps if the tax-based system, described as such, faced political or bureaucratic opposition, the program could instead be presented as a very low (or zero) interest rate loan program. Under this variation in participation, perhaps titled the Ability to Pay Loan Plan (APLP), the underlying mechanics and parameters would not change, though the program would be explained to parents in the context of loans and repayment (and repayment would continue to be set by the same fixed percentage of income) rather than tax policy changes. This recasting would be transparent to administrators, but might increase attractiveness to policymakers and parents.[39]

Is it feasible? There is a way to find out—establish such a program in several communities. It would be useful to begin in communities that have facilities that could be immediately utilized for such a program in order to learn the demand for such a program. The federal government could encourage state or local demonstrations by providing federal funds for the start-up of such a program.

Politically, such a plan might lead to a willingness to include pre-K as a part of our elementary schooling, and to finance it just as we finance our current elementary and secondary schooling.[40] Parents then could use the mechanism we have proposed to supplement the hours of pre-K and child care

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[39]Another variation, based on the underling idea of program content as serving both an educational and work support roles, might assign financial responsibility for the child care portion of the day to parents, while the three to four hours per day of instruction would be paid for by the school system which could use a lottery, special tax, or other financing instrument.

[40]The literature on early childhood education programs in OECD nations, particularly France, points to the importance of public support for the existence and expansion of effective and comprehensive early childhood education programs.

including after-school, summer recess, and holidays. Demonstrating that parents' are willing to pay for pre-K along with evidence that universal pre-K leads to improvements in our children's skills could be a powerful political message. This proposed financing scheme could serve as an important first step in building support for and confidence in an improved system of early childhood education in the United States.

## VII. CONCLUSION

The main focus of this report has been to explore ways to finance a preschool program that would be universally available to all 4-year-olds in the country, a program that would be of at least moderate quality (and in many places of high quality) and would be consistent with the recommendations of experts that 4-year-olds have much to gain, and society has much to gain, from providing a stimulating, caring preschool experience for all 4-year-olds.

As noted in Table 2, we provide a comparison of the various policy proposals that currently address the topic of financing ECE for 4-year-olds. We do so to allow the reader to more easily assess the similarities and differences between these schemes and to identify common themes. Because financing is the topic considered in this paper, we devote the greatest amount of attention to the most important dimensions of program financing. However, because financing may be closely tied to the type of early education program provided and our goal is to analyze the feasibility of financing of a developmentally appropriate and high-quality full-day, full-year universal program, we also consider the extent to which proposals meet this goal. Finally, we identify strengths or unique features included in the proposals.

Considering the group of proposals as a whole, we are struck by the diversity and creativeness of the policy recommendations offered. In terms of quality, Blau's focus on ECE quality and especially the idea of creating a financial incentive so that parents will be induced to pay more attention to quality is clearly worthy of serious consideration in developing future proposals for universal preschool for 4-year-

olds. Included in this set of attractive ideas is providing parents with appropriate quality information and trying to find ways to encourage parents to act on quality recommendations based on developmental research in selecting a preschool for their children. (The other aspects of his plan such as discontinuing TANF seem more problematic in terms of the income of these families. If, however, such funds were diverted toward pre-k and child care, they could contribute significantly to the financing of preschool for children in low-income families.)

In terms of the financial contribution of parents, nearly all financing proposals include some share paid by parents based on ability to pay. The proposal by Vast to use a system similar to the financial aid system for higher education is a promising suggestion. A system such as this, based on income considerations more broadly defined than the percentage of federal poverty line standard, would ensure that our impression of low-income children in need of public subsidy is not defined overly narrowly (the student loan component and endowment would seem far less likely to be successful as Vast also notes).

The majority of proposals reviewed focus on providing preschool for 4-year-olds in low-income families rather than a universal program. The exceptions are the current programs in Georgia and several other states and our own proposal. Sawhill and Thomas focus on poverty alleviation and combining a number of smaller policy modifications and by doing so highlight the extent to which we could work within or only slightly modify the existing system if additional funds were available to do so. This has the attraction of feasibility but would not achieve the goal of universal preschool. The lottery financing model used in Georgia's Voluntary PreK Program gives focus to the extent to which states can raise revenue to fund existing or proposed systems of ECE. We have some doubts, however, about the wisdom of building a universal preschool system based on financing from state lotteries both in terms of stability of the revenue stream and the incidence of the "tax."

Another consistent theme, however, is that the sources from which needed funds would be drawn are rarely specified. This reliance on what we have labeled general revenues is likely a legitimate reflection of the need to tailor policy proposals to the resources at hand when the proposal is considered.

Yet lack of a clear funding source may also hinder a proposal's progress from concept to law. It is for this reason that we developed our proposal with attention to the method by which revenues would be raised.

Our proposal is based on ability to pay as reflected in the existing tax system, and focuses on parents as the main financial contributors. By using a 10-year period over which parents would contribute, it avoids reducing the current income of these families by more than 1 to 5 percent. Current public funds targeted at children of lower-income families (CCDF and TANF funds for child care) could be used to improve the quality of programs especially for these children whom research suggests have the most to gain from high-quality preschool. There would be issues with the need for initial dollars before the system reached an equilibrium and which parents would enroll their children.

Other developed countries have universal preschool programs for 4-year-olds. As suggested by our analysis of existing financing proposals, some combination of (1) parental contributions based on a broadly defined concept of ability to pay, possibly using several years over which they make their contribution, (2) a financial incentive to select a preschool program that meets certain dimensions of quality, and (3) public subsidies for children in lower income families, could serve as the core to finance such a program in the United States. If combined with the elimination of some of the current tax subsidies for child care for children in this program and the use of additional one-time or short-term funds from other sources, such a program could be started rather quickly at least on an experimental basis at modest additional cost to the U.S. Treasury. The country has much to gain from pursuing such a strategy.

We note that parents in Seattle, Washington, show a willingness to pay for full-day kindergarten as two elementary schools charge participating parents $200 per month and use the proceeds to subsidize class reduction initiatives in addition to funding the program (Gewertz, 2002). Although it is not clear whether this demand directly reflects parents' appreciation of the value of early childhood education as opposed to a need for an affordable child care alternative, it does demonstrate a desire for expanded ECE services. A recent nationwide poll of 800 registered voters placed education second only to jobs and the economy as their top priority (Education Week, 2002). And, in listing priorities for education dollars,

early childhood education was cited as their top priority by 24 percent of respondents to the poll. To accomplish this we need a feasible financing scheme. This report has been designed to review existing proposals and provide a basis for moving the goal forward. The analysis above suggests a way to achieve a goal of near universal preschool for 4-year-olds.

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