Key to Economic Success in the 21st Century

Investment in Early Childhood Programs

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Investment in Early Childhood Programs

A report prepared for the
Bay Area Council
and the
Bay Area Early Childhood Funders

by

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Executive Summary

Business leaders, as employers and taxpayers, are acutely aware that a well-educated, high-performing workforce is key to maintaining the Bay Area's competitive advantage in the global economy of the 21st century. Currently, however, many students leave school without the skills and attitudes necessary for economic success, and approximately 20% of Bay Area employees lack even a high school diploma. Improving educational outcomes is an economic imperative. As California Superintendent of Public Instruction Jack O'Connell said in his 2008 State of Education Address, "Statewide test scores in 2007 indicate that we need to work harder to raise the achievement of all our students and that we have made little progress in closing the achievement gap…We simply must recognize that the students of today are our greatest asset for tomorrow, and we must build those assets for all of us to succeed."

Measures to improve educational outcomes, however, must begin long before children enter kindergarten. A substantial "school readiness gap" already exists when some children arrive at kindergarten, and children who begin school less prepared to succeed fall further behind as they move on in their educational and working lives.

> "The best way to improve the American workforce of the 21st century is to invest in early education, to ensure that even the most disadvantaged children have the opportunity to succeed alongside their more advantaged peers."
>
> —James Heckman
> Nobel Laureate in Economics

High-quality early care and education is necessary for tomorrow's workforce.

A substantial body of research now shows that investments in high-quality educational experiences during the years from birth to age five significantly improve not only school achievement, but also a range of social and economic outcomes throughout life. In fact, economists have shown that *public investments in high-quality early care and education generate a higher rate of return than almost any other public investment.*

The importance of the early childhood years to later educational outcomes is explained by recent advances in brain research, which have shown that the years from birth to five are the time when the brain undergoes most of its growth—90% of brain growth occurring before the third birthday. The research also shows that early experiences actually shape the architecture of the brain as it develops and have a uniquely powerful effect on later capacity to learn. With most parents of young children now in the workforce, many of those powerful experiences take place in out-of-home early care and education (ECE) settings—including infant care, child care centers, family child care, and preschools.

High-quality early care and education also contributes to the productivity of today's workforce.

By reducing the financial burden of early education and providing reliable and secure care for children while parents are working, a public investment in ECE allows parents to enter the workforce more easily, decrease absenteeism, earn higher wages, move between jobs less frequently, and achieve higher productivity.

"Early education is most certainly the next wave of educational reform…The U.S. is simply playing catch-up with the rest of the industrialized world. Most advanced nations already invest in early education. Indeed, there is already a deep appreciation worldwide among global business leaders of the relationship between investment in early education and the quality of the workforce. All across Europe, early education and care are already part of the national infrastructure, long accepted as necessary in raising an educated, productive citizenry. Similarly, Asian countries have long valued early education of their youngsters."

—Dr. Donna Shalala
Secretary of Health & Human Services under President Clinton

High-quality early care and education generates high payoffs for state and local governments and taxpayers.

Students who get off to a good start with high-quality ECE require fewer additional resources in school. As adults, they draw on fewer social services and pay more in taxes. From a fiscal standpoint, these savings to taxpayers exceed the costs of providing ECE.

High-quality early care and education has direct economic benefits for regional economies.

Early care and education is a $1.66 billion industry that provides more than 37,000 jobs in the region covered by this report, i.e., the nine counties surrounding the San Francisco Bay (the Bay Area). Moreover, studies have shown that the multiplier effect of investments in ECE, as measured by the sector's stimulation of other regional economic activity, is stronger than for most other industries—and strongest when the care is of high quality.

Research has documented high returns on public investment in early care and education.

Rigorous peer-reviewed longitudinal studies of three programs show that high-quality ECE offers one of the largest returns on investment of any public spending for economic development, with payoffs in:

- **Education**: Students receiving high-quality ECE scored higher on IQ tests, performed better throughout their school years, were less likely to repeat grades or require special education, and were more likely to graduate from high school and to attend college.

- **Crime**: Children who had received high-quality ECE were less likely to be arrested, prosecuted, and incarcerated as either juveniles or adults.
- **Earnings, employment, and tax revenue**: Mothers of children receiving high-quality ECE earned up to $74,012 more during the period studied than those without ECE. Adult workers who had received high-quality ECE as children suffered less unemployment, earned more, and contributed more in taxes over their working lives.
- **Health and social services**: Students who had received high-quality ECE were less likely to smoke. As adults, they were less likely to depend on public assistance and less likely to engage in abusive behavior toward their own children.
- **Net benefits to costs**: Estimates of the ratio of net social benefits of high-quality ECE to the net costs of providing it ranged from a high rate of return of 17 to 1 to a lower rate of return of 2.5 to 1; but in *all* estimates, benefits exceeded costs.

"The fundamental insight of economics is manifested in a growing body of program evaluations that shows that early childhood programs can generate government savings that more than repay their costs and produce returns to society that outpace most public and private investments."

—RAND Corporation (2008)
"What does economics tell us about early childhood policy?"

Today in the Bay Area, California, and the United States as a whole, public investment in high-quality early care and education is insufficient to realize these potential benefits.

Many families cannot afford the cost of ECE.

Early care and education in the Bay Area is expensive, and working families with young children (most of whom receive no state subsidies) typically devote large portions of their income to child care costs.

- **Bay Area hourly costs of ECE** average $6.40 for infants and toddlers and $4.46 for preschool-age children (two-and-a-half to five years) in center-based programs; $3.92 an hour for children birth through five in family child care.
- **Bay Area annual cost per child** averages $12,807 per year for infants and toddlers and $8,928 for preschoolers in center-based programs; $7,831 for children birth through five in family child care.
- **Bay Area annual cost as a percentage of family income**: These ECE costs are 24.6% of average annual family income for single-parent families. Among all families with incomes under $48,372, the average ECE cost is equal to 27.8% of the average annual family income. (An income of $48,372 is 75% of the state median income for a family of four, below which families are eligible for child care subsidies.)

Public subsidies for ECE are available to only a minority of eligible families.

Although the state of California spends over $397 million annually on subsidized early care and education in the Bay Area, these funds are not enough to cover the large number of families eligible for assistance. There are 146,803 children in the Bay Area who live in working families eligible to receive these subsidies, but only 55,192 (37.6%) receive them, either by attending centers with state contracts to provide subsidized care (Title 5) or by receiving vouchers for state-subsidized care with providers of their choice (Title 22). Another 11,897 (8%) of low-income children are enrolled in federal Head Start programs.

Public subsidies are one-half to two-thirds the amount necessary to provide high-quality ECE—and many Bay Area programs provide less than high-quality care.

The leading method for evaluating the quality of ECE uses a nationally recognized, rigorously evaluated assessment tool called the Early Childhood Environmental Rating Scale (ECERS). Trained observers use this instrument to rate programs in seven areas: space and furnishings, personal care routines, language-reasoning, activities, interactions, program structure, parents, and staff.

Full-time, full-year, high-quality early care and education for a two- to three-year-old preschooler is estimated to cost an average of approximately $13,333 per child (based on the average amount of time children spend in care). By contrast, the annual subsidy for full-time care in a center with a state contract is $8,223. The average per-child voucher subsidy rate for the Bay Area is $ 9,916.

Considering all care, subsidized and unsubsidized, researchers at the Marion Wright Edelman Institute at San Francisco State University found that more than half of the 358 ECE providers in San Francisco assessed with the ECERS since 2002 operate at low to medium levels of quality. Low quality is linked to a number of factors, including low pay. Researchers from UC Berkeley found that salary levels for educators in the ECE workforce are one-half to two-thirds those of public elementary school teachers and that only 65.7% of site directors and 33.7% of teachers in Bay Area child care centers hold BA degrees.

Additional investments are needed for a successful early care and education system.

- **Workforce development**: Expanding ECE will require recruiting and training new ECE educators. Increasing quality standards will also make it necessary for many current ECE educators to obtain additional education and training.
- **Facility construction**: Making ECE available to all young children who need it would require additional facilities.

Policy Recommendations and Conclusions

Early care and education is an investment in the economy and future workforce—one that California and the Bay Area cannot afford to neglect. The business community of the future requires an even more highly-educated and skilled workforce than it does now. Our deliberations about ECE must therefore consider that tomorrow's workforce is entering school today. The cost of allowing even some of these children to fail in school and later in life is high. The following recommendations are based on specific findings contained in this report:

"The nature of the Bay Area requires a well-trained workforce that has the capacity to update their skills and meet the needs of emerging industries. That can't happen without an affordable and high-quality child care system."

—Jim Wunderman
President & CEO, Bay Area Council

- **Increase public investment in high-quality ECE for all children ages 0 to 5.**
  The aggregate net benefits for investing in high-quality ECE offer one of the highest returns of any public investment. In the end, investing in high-quality early care and education saves taxpayers more money than it costs.

- **Invest first in children from low-income families and provide subsidized ECE to all eligible children.**
  All children stand to benefit from public investments in high-quality ECE, but those from families with incomes below 75% of the state median income will gain the most and offer the highest payback.

- **Invest amounts sufficient to support high-quality care.**
  Because high quality is necessary in order to realize high returns, state subsidies should be increased to the level necessary to provide high quality, and the state should structure financial incentives to providers to support the development of quality care.

- **Ensure that early care and education meets the needs of working families.**
  Many families struggle to meet the expenses of ECE at current market prices, some devoting 25% or more of their income to pay for care for their young children. Working families need access to full-time, full-year ECE. Special efforts are required to make sure high-quality care is available for children with special needs, children from all cultural and language groups, and children whose parents work non-traditional hours.

- **Educate, train, and adequately compensate the ECE workforce.**
  Early childhood educators in the Bay Area are underpaid, and many are undereducated. Only through raising salary levels can we attract more qualified, educated professionals to enter and remain in this field. Additional teachers must be educated, and current educators must upgrade their skills. State institutions of higher learning need to prepare to meet this upgrade requirement.

- **Build and maintain additional facilities.**
  New and current ECE providers will need financial assistance to build or acquire the additional facilities necessary for providing high-quality care.

A well-established body of research has shown that high-quality early care and education is one of the most cost-effective public investments we can make. This investment is essential to the future of our economy and the quality of life in the Bay Area in the 21st century.

1 The Public Stake in High-Quality Early Care and Education

High-quality early care and education is essential for the productivity of the 21st century workforce.

As the world economy grows ever more technologically advanced and globally integrated, the region's economy will demand a highly educated, skilled, and flexible workforce. At the same time, the aging of the population will mean that tomorrow's workers will shoulder a greater responsibility in funding Social Security and Medicare for an increasing number of retirees.

Current trends, however, threaten to undermine the education and future productivity of tomorrow's workforce. Currently, about 20% of California's adults lack a high-school diploma.[1] The percentage of children growing up in "adverse environments" with risk factors that typically lead to higher rates of school failure is also increasing.[2] According to economist James Heckman, "These children will form much of the future workforce and they need help to become as productive as the country needs them to be."

Much of the current educational policy debate focuses on the high rate of school failure among children from disadvantaged families and the "achievement gap" between them and middle class or affluent students. High-quality early care and education has unparalleled potential for closing this achievement gap and promoting school success for all children.

Studies have demonstrated that a substantial achievement gap already exists between affluent and disadvantaged children when they enter kindergarten. In one

> "Recently released RAND research shows that the achievement gap begins at the starting gate, when kids who have not attended preschool first enter their kindergarten classrooms without knowing their letters, sounds, shapes, colors or numbers…This school readiness gap mirrors the achievement gap in later grades. Students who start school behind tend to stay behind…While large percentages of all children fall short of state standards, some groups of students are falling short by even larger margins…[E]ffective preschool raises achievement levels for all children, and it offers real hope for closing the school-readiness gap."
>
> — Jack O'Connell
> California State
> Superintendent of Education

[1] Insight Center for Community Economic Development (January 2008). *The Economic Impact of the Early Care and Education Industry in Los Angeles County*, quoting US Census, 2006.
[2] Heckman, J. & Masterov, D. (2004). *The productivity argument for investing in young children*. Committee for Economic Development: Washington, D.C.

study, kindergartners from families in the poorest quartile performed 37% lower in reading readiness and math readiness than peers from the richest quartile.[3] Once children start at a disadvantage, they have a hard time catching up. In a 2007 RAND study in California, researchers found that in the second grade, the achievement gap between children from low-income families and more affluent families was 32% as measured by a standardized language arts test.[4]

"Early experiences have a uniquely powerful influence on the development of cognitive and social skills and on brain architecture and neurochemistry."[7]

Recent research in brain development explains the powerful impact of pre-kindergarten experiences on later school success. The human brain achieves 90% of post-natal growth between birth and age three and continues growing rapidly during the preschool years. Learning during this early period actually shapes the physical structure of the brain and lays the foundation for future emotional and cognitive development.[5] Children who are stimulated and encouraged, both cognitively and emotionally, during these first five years begin to develop many of the basic skills and abilities that are crucial for their subsequent scholastic success: curiosity, self-confidence, self-control, motivation, group identification, goal orientation, and a love for learning.[6]

Low-income families often lack the resources necessary to provide their children with the opportunities and experiences that research has shown are linked to future educational and economic achievement. More affluent families, for example, are much more likely to enroll their children in preschool. Nationally, over 65% of children from families with incomes over $75,000 attended preschool, whereas only 44% of children from families with incomes below $30,000 did so.[8]

A growing body of research, some of which will be outlined in detail in Chapter 2, shows that high-quality early care and education can reduce or eliminate the achievement gap

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[3] Lee, V.E. & Burkan, D.T. (2002). *Inequality at the Starting Gate: Social Background Differences as Children Begin School*. Economic Policy Institute: Washington, D.C.

[4] Cannon, J.S. & Karoly, L.A. (2007). *Who is Ahead and Who is Behind? Gaps in School Readiness and Student Achievement in the Early Grades for California's Children*. RAND Corporation: Santa Monica, CA.

[5] For a list of studies on this topic, see pp. 2–4 in Karoly, L., Greenwood, P., Everingham, S., Hoube, J., Kilburn, R., Fydell, P., Sanders, M., & Chiesa, J. (1998). *Investing in our children: What we know and don't know about the costs and benefits of early childhood interventions.* RAND Corporation: Santa Monica, CA.

[6] Shonkoff, J. & Phillips, D., eds. (2000). *From Neurons to Neighborhoods: The Science of Early Childhood Development*. National Academy of Sciences Press: Washington, D.C.

[7] Knudsen, E.I., Heckman, J., Cameron, J.L., & Shonkoff, J. (2006). "Economic, neurobiological, and behavioral perspectives on building America's future workforce." *Perspective*. National Academy of Sciences Press: Washington, D.C.

[8] Weil, E. (June 3, 2007). "When Should a Kid Start Kindergarten?" *New York Times Magazine*. Retrieved November 19, 2007 from http://www.nytimes.com/2007/06/03/magazine/03kindergarten-t.html.

that exists when children enter school. It can further allow children from disadvantaged families to enter school well prepared and ready to succeed.

High-quality early care and education increases the productivity of today's workforce.

Lack of high-quality, reliable child care contributes to parents' absenteeism, tardiness, and turnover at work, according to a study by the Families and Work Institute. Its researchers found in a survey of a nationally representative sample of workers that almost 30% of employed parents had experienced a breakdown of their child care arrangements in the past three months.[9]

Studies of parents moving from welfare to work found that 44% cited lack of child care as a barrier to employment and that the availability of safe and affordable child care was one of two key factors, along with job quality, in women's ability to sustain employment.[10]

The quality of early care and education, not just its availability, makes a difference in parents' work productivity. An Abt Associates National Report on Work and Family found that "when parents are satisfied with their child care arrangements there are fewer conflicts and breakdowns and thus fewer absences."[11] Reliable child care can increase maternal labor force participation,[12] increase mothers' earnings,[13] and enable

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[9] Bond, J.T., Galinsky, E., & Swanberg, J. (1998). *The 1997 national study of the changing workforce*. New York Families and Work Institute: New York.

[10] Insight Center for Community Economic Development, *The Economic Impact of the Early Care and Education Industry in Los Angeles County, January 2008*., citing Flaming, D., et al. (2002). *Running Out of Time: Voices of Parents Struggling to Move from Welfare to Work*. Retrieved February 9, 2007 from http://www.economicrt.org and Boushey, H. (2004). *Staying Employed After Welfare: Work Supports and Job Quality Vital to Employment Tenure and Wage Growth*, Retrieved August 30, 2006 from http://www.epinet.org/content.cfm/briefingpapers_bp128.

[11] Morrissey, T. & Warner, M.E. (2007). "Why Early Care and Education Deserves as Much Attention, or More, than Prekindergarten Alone." *Applied Development Science, Vol. II, No. 2,* citing Abt Associates (2000), *National report on work and family*. Cambridge, MA.

[12] Morrissey & Warner, ibid.

[13] Barnett, W.S. & Masse, L.N. (2007). "Comparative benefit-cost analysis of the Abecedarian Program and its policy implications." *Economics of Education Review, Vol. 26,* pp. 113–25.

workers to increase their skills.[14] The businesses that employ these parents gain from having a more stable, reliable, skilled, and productive workforce.

High-quality ECE benefits taxpayers and contributes to the fiscal health of state, local, and federal governments by decreasing expenditures and increasing revenue.

"Children who have quality early education will start on a better life trajectory that means they are not only more successful in the early years but will be better able to use higher education and job training later in life. Workers who need to change careers or just acquire new skills will benefit from better learning abilities acquired early in life."

—James Heckman and Dimitriy Masterov, University of Chicago

By making it possible for children to succeed in school, early care and education contributes to workers' productivity, expanding the economy and boosting tax revenues. It also allows government at all levels to spend less for remedial and social services and for law enforcement. One economist reviewing research in the field of ECE concluded that public investment in comprehensive early childhood development programs for all children in low-income families, for example, would start paying for itself in 17 years and generate billions more than it costs within 25 years.[15]

Children who have received high-quality early care and education are less likely to require special education and to repeat classes while in school, and are less likely to drop out of high school. Those that graduate are more likely to go on to college. Girls are less likely to become pregnant as teenagers. As adults, these children are less likely to commit crimes or become incarcerated.[16] All of these improvements allow taxpayers to avoid substantial costs. The increased earnings of those who have received high-quality early care and education also yield higher tax revenue.

High-quality ECE contributes to overall economic growth.

Providers of ECE services make substantial direct and indirect contributions to the local Bay Area economy by employing thousands of workers and supporting hundreds of millions of dollars of economic activity. The National Economic Development and Law Center (NEDLC), now Insight Center for Community Economic Development, has produced excellent county-specific studies of the economic impact of early care and

[14] National Coalition for Campus Children's Centers (1999). *Campus Child Care Bill: Child Care Access Means Parents in School Act, S1151 and H.R. 3936* (policy brief).
[15] Lynch, R.G., (2004). *Exceptional Returns: Economic, Fiscal, and Social Benefits of Investment in Early Childhood Development*. Economic Policy Institute: Washington, D.C.
[16] Studies detailing these results will be reviewed in Chapter 2.

education within California, including the Bay Area region. To provide updated, Bay Area-wide estimates, data from these reports was extracted and adjusted to derive 2005 estimates for total spending and employment. This was done using methods described in some detail in Appendix A of this report. Table 1.1 presents estimates for total ECE spending and employment in 2005 in each of the nine Bay Area counties. These estimates show that in 2005, gross receipts for ECE providers totaled over $1.66 billion and that ECE providers employed 37,241 people.

Table 1.1
Estimated Total Spending and Total Employment of Bay Area Early Care and Education Providers in 2005

County	Estimated Total Spending	Estimated Total Employment
Alameda	$387,703,422	8,787
Contra Costa	$260,469,511	4,932
Marin	$73,388,123	1,626
Napa*	$29,263,055	645
San Francisco	$191,000,000	4,415
San Mateo	$144,423,548	3,506
Santa Clara	$376,963,273	8,321
Solano	$96,652,865	2,554
Sonoma	$100,713,024	2,456
Total	**$1,660,576,821**	**37,241**

Source: Authors' calculations from adjustments of NEDLC data.
* Napa estimates from extrapolation.

The economic impact of early care and education is even greater because spending in this sector has a higher multiplier effect, defined as a measure of "how an industry's spending ripples through the regional economy, stimulating production, purchasing, and/or employment," than most other industries. The multiplier for child care ranks in the 93rd percentile.[17] Here too, the quality of early care and education makes a difference. A team of Cornell University researchers reported that "regional economic multipliers are higher in states that have higher quality standards."[18]

[17] Warner, M.E., & Liu, Z. (2006). "The importance of child care in economic development: A comparative analysis of regional economic linkage." *Economic Development Quarterly, Vol. 20*, pp. 97–103, cited in Morrissey & Warner (2007), op. cit.
[18] Morrissey & Warner, (2007), op. cit.

Conclusion

Because of these benefits, including the productivity of the future workforce, the productivity of the current workforce, the reduced burdens on taxpayers, and the overall growth of the economy, investments in high-quality early care and education return a higher rate on public investment than most other expenditures. In the next chapter, the major studies that document this robust rate of return are reviewed.

2 High Returns for Public Investment in Early Care and Education: What the Research Shows

It is now possible to document the long-term return on investment in quality early childhood programs. Longitudinal studies have tracked the lifetime educational and economic achievements of children who were enrolled in three high-quality programs before entering kindergarten. A number of rigorously evaluated, peer reviewed economic studies have been conducted using data from these programs. All have concluded that the economic returns from public investments in ECE are substantial and far exceed the up-front costs.

The High/Scope Perry Preschool

- **Program**: Early 1960s. Children received two years of very high-quality preschool plus home visits to parents. Teachers had education and experience in both special education and early childhood development. Low student/teacher ratios.
- **Children**: About 120 low-income African-American children in Ypsilanti, Michigan.
- **Research design**: Children randomly assigned to treatment and control groups. Data most recently analyzed in 2006 and included 90% of the original subjects.[19]
- **Benefit/cost ratio**: 17.1 to 1.

(Researchers estimated a per-child total of over $240,000 in benefits compared to just $15,166 in costs [in 2000 dollars]. For each dollar spent, researchers estimated that participants themselves realized $4.17, mostly in increased earnings, and the general public realized an additional $12.90, mostly because of reduced crime.)

Chicago Child-Parent Centers

- **Program**: 1967 to present. Children receive several years of very high-quality pre-kindergarten and kindergarten, funded by Title 1. Teachers have BA degrees, extensive coursework in early childhood education, and earnings comparable to that of public school teachers. Low student/teacher ratios.

[19] Belfield, C.R., Nores, M., Barnett, W.S., & Schweinhart, L. (2006). "The High/Scope Perry Preschool Program: Cost-Benefit Analysis Using Data from the Age-40 Followup." *Journal of Human Resources, Vol. 41 (1)*, pp. 162–90.

- **Children**: Ages three to seven years in four economically disadvantaged neighborhoods.
- **Research design**: 1,500 children randomly assigned to treatment or control group. Over 90% of the subjects were included in a 2002 economic analysis.[20]
- **Benefit/cost ratio**: 7.14 to 1.

(Per child, researchers estimated $41,067 in lifetime benefits from a $6,692 investment [in 1998 dollars]. Researchers estimated that for each dollar spent, participants themselves realized $3.29, mostly in increased earnings, and the general public realized an additional $3.85, mostly because of reduced crime and increased tax revenues.)

Carolina Abecedarian Project

- **Program**: Late 1970s through early 1980s. Children received high-quality care and education from infancy through five years of age, ten hours a day, five days a week, 50 weeks a year. Highly-trained teachers. Low student/teacher ratios.
- **Children**: 112 "at risk" children in Chapel Hill, North Carolina
- **Research design**: Children randomly assigned to treatment or control group; 93% of the original subjects were tracked until age 21 and included in a 2007 study.[21]
- **Benefit/cost ratio**: 2.5 to 1.

(Per child, the 2007 study estimated $94,802 in lifetime benefits for the $63,476 ECE investment [in 2002 dollars]. Researchers estimated that for each dollar spent, participants and their parents realized $2.35, primarily in the form of increased earnings by the mother, and the general public realized an additional $0.14, mostly because of reduced educational and welfare expenditures and increased tax revenues. Two factors were cited by researchers in explaining the relatively lower benefit-to-cost ratio than in the other two longitudinal studies. First, the estimated per-child investment of $63,476 was considerably higher than in the other two pre-kindergarten programs because Abecedarian provided a much more comprehensive and expensive package of services. Second, researchers were unable to detect a statistically significant crime savings in the Abecedarian program, whereas these savings were considerable in the other two programs. This might have been because Chapel Hill has a lower overall crime rate than either Chicago or Ypsilanti. Another factor is that the studies followed children for different lengths of time into their adult lives.)

[20] Arthur J. Reynolds, Judy A. Temple, Dylan L. Robertson, and Emily A. Mann. (2002). "Age 21 Cost-Benefit Analysis of the Title I Chicago Child-Parent Centers." *Educational Evaluation and Policy Analysis, Vol. 24*, pp. 267–303.
[21] Barnett & Masse, op. cit.

These programs all realized high returns on investment because of outcomes such as:

- reduced grade retentions
- reduced special education placements
- increased high school graduation
- higher earnings for the mothers (in the Abecedarian Project)
- increased college enrollment
- higher lifetime earnings
- higher tax revenues
- less reliance on welfare
- reduced rates of smoking
- reduced rates of crime

Table 2.1 summarizes some of the most important findings from the longitudinal studies of these three high-quality programs. In the table, all percentage changes and dollar figures are made in reference to the control group. For example, the table shows that in the Chicago Child-Parent Centers program, 41% fewer students in the treatment group than in the control group were placed into special educational programs and that students in the Chicago Child-Parent treatment group earned $24,823 more over their lifetime than those in the control group.

Table 2.1
Estimated Benefits of High-Quality Early Care and Education in Three Controlled Experimental Programs
(percentage changes and dollar figures are made in reference to the control group)

Program Effect	Chicago Child-Parent Centers	High/Scope Perry Preschool	Carolina Abecedarian Project
Education			
Special Education Placement	- 41%	- 26%	- 23%
Grade Retention	- 40%	- 13%	- 31%
High School Completion	+ 20%	+ 44%	+ 16%
College Enrollment	+ 33%	N.D.	+ 23%
Crime			
Arrest by Age 19	- 33%	- 39%	N.D.
Incarceration of Children	N.D.	- 46%	N.D.
Income and Tax Revenue			
Increased Lifetime Earnings	$24,823	$57,403	$40,416
Increased Maternal Earnings	N.M.	N.M.	$74,012
Increased Tax Revenue	$8,763	$16,019	$35,506
Intergenerational Earnings	N.M.	N.M.	$6,162
Social Services			
Incidence of Child Abuse & Neglect	- 5%	N.M.	N.M.
Reliance on Welfare	N.M.	- 17%	- 50%
Health			
Smoking Reduction	N.M.	- 24%	- 16%
Other			
Child Care Savings	$2,005	$1,031	$29,735

Sources: Authors' calculations from Wat (2007), Temple and Reynolds (2007), Reynolds (2002), Barnett and Masse (2007), Karoly, et al. (1998), Belfield, et al. (2006), and Lynch (2004).
N.D. = No Observable Difference. N.M. = Not Measured.
All monetary figures have been inflation-adjusted by authors to reflect the 2005 price level.

Investment in high-quality ECE for all children yields benefits.

All three of the programs cited above were specifically targeted at children from economically disadvantaged families. This led researchers to ask if high rates of return would diminish or disappear entirely if applied to programs aimed at children from families whose incomes were not at such a low level. While no such "universal" ECE program has been evaluated using the same rigorous assessment methods described above, several types of evidence indicate that investment in quality early care and education for all young children would yield substantial returns.

Many non-poor children struggle academically.

W. Steven Barnett, an expert on the costs and benefits of early care and education, estimates that one third of middle-income children and one fourth of upper-middle-income children lack "key pre-literacy skills" when they enter kindergarten.[22] Nationally, 12% of middle-income children are held back a grade at some point during school and 11% drop out before graduating.[23]

Universal pre-kindergarten programs have improved school success.

In a study of a Tulsa, Oklahoma universal preschool program, children showed significant cognitive gains. The gains were largest for Latino, Native American, and low-income children, but statistically significant for all groups.[24] Studies of universal pre-kindergarten

[22] Insight Center for Community Economic Development, op. cit., quoting Barnett, W.S., speaking to a hearing on preschool for all, Sacramento, 2004.
[23] Coley, R.J. (2002). *An Uneven Start*. Princeton, New Jersey: Educational Testing Service, cited in *Insight*, op. cit.
[24] Gormley, W.T. Gayer, T., Phillips, D., & Dawson, B. (2004). "The effects of Oklahoma's Pre-K program on school readiness." Georgetown University Center for Research on Children in the U.S.: Washington, D.C. Retrieved on May 16, 2008 from www.crocus.georgetown.edu/reports/executive_summary_11_04.pdf .

programs in other states have shown that these programs have significantly increased early language, literacy, and math development.[25]

Projections based on data from studies of the Chicago Child-Parent Centers predict strong benefits from universal programs.

"Child care is the fabric of our economic infrastructure. If San Francisco is to reap the benefits this industry can produce, the public and private sectors need to work in partnership to strengthen the child care industry to maximize its potential to contribute to the city's economy—now and in the future."

—Gavin Newsom
Mayor of San Francisco

Robert Lynch of the Economic Policy Institute projected the likely benefits and costs of a universal pre-kindergarten program using data from the Chicago Child-Parent Centers for three- and four-year-olds and assuming that 71% would not be from poor families.[26] He estimated a net benefit-to-cost ratio of 8 to 1 (compared to 12 to 1 for a program targeted only at low-income children). Lynch estimated that the eventual return to government alone from the universal program would be 2 to 1 and that within 17 years, the annual fiscal benefits to the federal government would begin exceeding the program's annual costs.

Researchers at the RAND Corporation analyzed the costs and benefits of a universal half-day pre-kindergarten program for four-year-olds in California.[27] They adjusted for the fact that only about 25% of all four-year-olds in California had risk factors similar to children in the Chicago Child-Parent program, and children with fewer challenges would benefit less from the program. They also adjusted for the fact that nearly 64% of all four-year-olds in California were already attending pre-kindergarten programs, so the additional benefits to these children would be lower than to those in the Chicago Child-Parent program, who had not attended preschool previously. Their study still estimated a benefit-to-cost ratio of 3.15 to 1. On a per-child basis, researchers estimated $13,629 in lifetime benefits from a $4,300 investment (in 2003 dollars). The researchers estimated that about 57% of the benefits would accrue to the parents and children and about 33% to state and local government.

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[25] Insight Center for Community Economic Development, op. cit., citing Hustedt, J.T. et al. (2007). *The Effects of the Arkansas Better Chance Program on Young Children's School Readiness.* Retrieved on February 15, 2007 from http://nieer.org/resources/research/ArkansasYear1.pfg , also Barnett, W.S. et al. (2005). *The Effects of State Prekindergarten Programs on Young Children's School Readiness in Five States.* Retrieved on February 20, 2007 from http.//nieer.org/resources/research/multistate/fullreport.pdf .

[26] Lynch, R. (2007). *Enriching the Nation: Public Investment in High-quality Pre-kindergarten.* Economic Policy Institute: Washington, D.C.

[27] Karoly, L. & Bigelow, J. (2005). *The Economics of Investing in Universal Preschool Education in California.* RAND Corporation: Santa Monica, CA.

Quality ECE fosters long-term economic growth.

- **Increasing GDP**: The Brookings Institution, using findings from evaluations of the Perry Preschool Program, estimated that a universal pre-kindergarten program for three- and four-year-olds would have a powerful long-term effect on economic growth.[28] Assuming the program would extend educational attainment by an average of four months per child, they estimated that if such a program began in the US in 2010, per-capita GDP would increase by 0.88% by 2055 and by 3.5% by 2085. At that point, researchers estimated, the federal government would be collecting $400 billion in additional tax revenues compared to $59 billion in program costs.

- **Fostering non-cognitive qualities**: Economists James J. Heckman and Dimitriy Masterov analyzed data from the longitudinal programs described above and concluded that ensuring high-quality preschool to low-income young children is necessary to ensure future economic growth.[29] Their analysis suggested the programs produced the documented benefits by fostering non-cognitive gains such as motivation and persistence. They also noted that front-end investments to develop such qualities are much more cost-effective than attempting to fix problems once they have taken root.

"For Bay Area businesses to succeed in an increasingly competitive world economy, they need skilled and educated workers. Investing in early care and education brings an impressive return on investment, making it a key strategy for our children's educational success and the economic vitality of the region."

—Michael Walker
President
US Bank of Northern California

- **Yielding higher rates of return than traditional public supports for business**: In a study conducted by the Minneapolis Federal Reserve Bank, researchers Arthur Rolnick and Rob Grunewald, using data from evaluations of the Perry Preschool program, found a 16% internal rate of return on investment in ECE, which far exceeded internal rates of return for other public works projects and subsidies to businesses.[30] In another study, sponsored by the W.E. Upjohn Institute, Timothy Bartik demonstrated that investments in high-quality ECE have short-run rates of return similar to subsidies for sports stadiums and retail facilities, but have much higher long-run rates of return.[31] Also, Bartik showed that traditional subsidies to business tend to "reshuffle"

[28] Dickens, W., Sawhill, I., & Tebbs, J. (April, 2006). "The Effects of Investing in Early Education on Economic Growth." *Brookings Paper*. Brookings Institution: Washington, D.C.
[29] Heckman & Masterov, op. cit.
[30] Rolnick, A. & Grunewald, R. (March 2003). Early Childhood Development: Economic Development with a High Public Return. *Fedgazette*. Federal Reserve Bank of Minneapolis: Minneapolis, MN.
[31] Bartik, T. (2006). *The Economic Development Benefits of Universal Preschool Education Compared to Traditional Economic Development Programs*. WE Upjohn Institute for Employment Research: Kalamazoo, MI.

economic growth rather than enhance it, boosting growth and jobs in some regions while reducing them in others. Investments in ECE, on the other hand, tend to boost a region's economic growth and employment without reducing them in other places.

3 Ensuring High-Quality Early Care and Education

Not all early care and education programs, however, provide significant economic benefits. Many researchers have found that high-quality ECE is necessary to generate high returns.[32] One of the studies of the High/Scope program, for example, compared its outcomes to those of a program characterized by scripted "direct instruction," in which children were rewarded for answering teachers' questions correctly—a model that is developmentally inappropriate for young children. A longitudinal study found that children from the play-based High/Scope program experienced fewer emotional problems, including special education placement, marital problems, suspensions from work, and felony arrests, than those from the "direct instruction" group.[33] Another group of researchers found that children who had participated in Head Start programs with higher per-student spending had larger gains in reading scores and less chance of grade retention than students in lower-spending Head Start programs.[34]

In Bay Area early care and education today, quality is uneven—and the current levels of state subsidies are insufficient to provide for high-quality programs. Many families in the Bay Area are hard pressed to find care, let alone high-quality care, that they can afford. When costs force them to settle for lower quality ECE, they and the rest of society miss out on the many benefits of ECE. Since the benefits of high-quality early care and education are highest for low-income children, these families' inability to obtain high-quality ECE has particularly negative ramifications.

Methods for rating ECE quality: California programs fall short.

Within the ECE field, there is general agreement on the key elements necessary for high quality. The National Institute for Early Education Research (NIEER), for example, has issued research-based quality standards that cover teacher educational qualifications, in-service training hours, staffing ratios, class size, curriculum and supportive services.[35]

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[32] Reich, K. (Fall 2007). "The Power of Preschool." *Community Investments, Vol. 19, No 2*, pp. 7–12, citing Rolnick, A. & Grunewald, R. (March 2003). Early Childhood Development: Economic Development with a High Public Return. *Fedgazette.* Federal Reserve Bank of Minneapolis: Minneapolis, MN.

[33] High/Scope Educational Research Foundation. (1997). *High/Scope Preschool Curriculum Comparison Study*, retrieved on April 24, 2008 from http://www.highscope.org/Content.asp?ContentId=241.

[34] Currie, J. & Neidell, M. (2003). "Getting Inside the Black Box of Head Start Quality: What Matters and What Doesn't?" *National Bureau of Economic Research, Working Paper 10091*, cited in Lynch, op. cit.

[35] National Institute for Early Education Research. (2007). *State of Preschool: 2006 State Preschool Yearbook.* Rutgers University: New Brunswick, NJ.

The Early Childhood Environmental Rating Scales (ECERS), first developed in 1980 by researchers at the University of North Carolina, is an observational instrument that is currently widely-used in assessing quality. Researchers have generally found strong statistical relationships between high scores on the ECERS rating scale and positive educational outcomes once children enter school.[36] Several Bay Area counties (San Francisco, San Mateo, Alameda, Contra Costa, Marin and Sonoma) are using ECERS to evaluate the quality of ECE programs.

"The effects of child care derive not from its use or non-use but from the quality of the experiences it provides to young children."[37]

In San Francisco, these evaluations are being conducted by the Gateway to Quality program, a city-funded project administered by the Marian Wright Edelman Institute at San Francisco State University.[38] The Gateway to Quality program uses the composite score of 4.5 on the ECERS seven-point scale as a dividing line between acceptable quality and medium-to-low-quality programs (although ECERS generally uses a score of five (5) or above to define "good" quality). Of 170 ECE centers assessed since 2002, slightly less than half (48%) scored above 4.5. Of the approximately 188 family child care homes that were assessed with a family child care version of the scale, almost half (49%) scored above 4.5.

Current staff requirements and oversight based on standards recommended by the National Association of Child Care Resource and Referral Agencies (NACCRRA) show that California's current licensing standards and oversight fall behind most other states. In a recent update to a 2006 study on the stringency of state child care licensing standards and monitoring oversight, NACCRRA ranked California 48th out of 52.[39] The NACCRRA study examined each state's standards on a number of factors including staff/child ratios, directors' educational qualifications, and annual training requirements.

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[36] Peisner-Feinberg, E. S., Burchinal, M. R., Clifford, R. M., Culkin, M.L., Howes, C., Kagan, S. L., Yazejian, N., Byler, P., Rustici, J. & Zelazo, J. (1999). *The Children of the Cost, Quality, and Outcomes Study Go To School.* Frank Porter Graham Child Development Center: Chapel Hill, NC.

[37] Shonkoff, Jack P. & Phillips, Deborah A. (eds.). (2000). *From Neurons to Neighborhoods: The Science of Early Childhood Development.* National Academy of Sciences Press: Washington, D.C.

[38] See program description at: http://gatewaytoquality.sfsu.edu/about.html .

[39] National Association of Child Care Resource and Referral Agencies. (2006). *We Can Do Better: NACCRRA's Ranking of State Child Care Center Standards and Oversight.* Arlington, VA. The 2006 study examined policies in all 50 states, the District of Columbia, and Department of Defense programs for military families and ranked California 47th out of 52. See the 2009 update report at http://www.naccrra.org/publications/naccrra-publications/we-can-do-better-2009.update .

Education and compensation for teaching staff are key elements of quality.

Many researchers have identified teacher qualifications as a key element in ECE quality,[40] and some have established a clear link between teacher qualifications and children's educational achievement.[41] Although not all ECE experts agree, many have concluded that hiring teachers with a bachelor's (BA) degree in early childhood development or early childhood education is a key strategy for promoting high-quality ECE.

The leading professional organization in the field, the National Association for the Education of Young Children (NAEYC), awards its accreditation status to an ECE center only if 75% of its lead teachers hold a BA degree in an appropriate field.[42] NAEYC accreditation also requires that at least half of a center's assistant teachers have a Childhood Development Associate (CDA) credential and that the other half be enrolled in a credential program. The CDA credential requires specified coursework in early childhood education. Other experts recommend that assistant teachers have an associates' (AA) degree in early childhood education or child development.

Some states, including New York, Illinois and Maryland, have already raised their state licensing standards to reflect this emphasis on teacher qualifications. Each now requires that all teachers in state-financed pre-kindergarten programs have BA degrees.[43]

Bay Area teacher qualifications and compensation fall short of a high-quality standard.

A recent study of California's ECE workforce by the Center for the Study of Child Care Employment at the University of California at Berkeley found that the education of the early childhood workforce falls far short of that of public school teachers.[44] For example, only 65.7% of site directors and 33.7% of teachers at Bay Area child care centers held BA degrees. Only 24.7% of assistant teachers and 33% of family child care providers held an AA degree or higher.

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[40] Barnett, W. S. (2003). "Better Teachers, Better Preschools: Student Achievement Linked to Teacher Qualifications." *Preschool Policy Matters*, Issue 2. National Institute for Early Education Research: New Brunswick, NJ.

[41] Bowman, B., Donovan, S.M., & Burns, M.S. (2000). *Eager to Learn: Educating Our Preschoolers*. The National Academies Press: Washington, D.C.

[42] National Association for the Education of Young Children. *NAEYC Academy for Early Childhood Program Accreditation*, retrieved from: www.naeyc.org/academy/standards/standard6/standard6A.asp .

[43] Whitebook, M. (2003). *Early Education Quality: Higher Teacher Qualifications for Better Learning Environments – A Review of the Literature*. Center for the Study of Childcare Employment. University of California: Berkeley, CA.

[44] Whitebook, M., Sakai, L., Kipnis, F., Lee, Y., Bellm, D., Almaraz, M., & Tran, P. (2006). *California Early Care and Education Workforce Study, Licensed Child Care Centers, Statewide 2006*. Also, *California Early Care and Education Workforce Study, Licensed Family Child Care Providers, Statewide 2006.* Center for the Study of Childcare Employment. University of California: Berkeley, CA.

Wage and compensation levels for the early childhood workforce are considerably beneath those for elementary school teachers in Bay Area public school districts. Based on data from the California Department of Education,[45] the average public elementary school teacher salary in six Bay Area counties in 2005–2006 was $60,421 plus benefits.[46] According to the California Early Care and Education Workforce Study, salaries of ECE workers were approximately 60% of this level.[47] For example, average full-year salaries for Bay Area child care teachers with BAs ranged from $32,178 to $38,730. Full-year salaries for the highest-paid assistant child care teachers averaged $24,544.

The high turnover among ECE teachers is one result of poor compensation. According to the above-referenced workforce study, 15% of directors of Bay Area child care centers left or stopped working during the previous year, as well as 18.1% of teachers and 22.3% of assistant teachers. This high turnover interferes with the stable relationships young children need for healthy development and learning, requires other staff to spend time filling in for missing teachers and training new colleagues, and represents a loss of skilled, experienced teachers from the field. The National Child Care Staffing Study found that high turnover had a "detrimental impact on child care quality and children's developmental outcomes."[48]

Estimating the cost of high-quality early care and education.

A simple cost model was developed for this report to generate hourly and annual cost estimates per child for a hypothetical high-quality child care center. These estimates were then discussed with representatives from four Bay Area organizations with excellent reputations for providing high-quality ECE services.[49] The resulting cost estimates are in line with these organizations' actual costs. Table 3.1 shows the cost estimates generated by the model along with the basic assumptions used to generate them.

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[45] California Department of Education, School Fiscal Services Division. (2006). *Selected Certificated Salaries and Related Statistics 2005–06.* Sacramento, CA.

[46] Authors' calculation using data from Contra Costa, Marin, Napa, San Mateo, Santa Clara, and Sonoma counties.

[47] California Child Care Resource and Referral Network. (July 2006). *California Early Care and Education Workforce Study: Licensed Child Care Centers and Family Child Care Providers, 2006 Statewide Highlights*. Center for the Study of Child Care Employment, Institute of Industrial Relations. University of California: Berkeley, CA.

[48] Whitebook, M. & Bellm, D. (1999). *Taking on Turnover.* Center for the Child Care Workforce: Washington, D.C.

[49] Special thanks to Margaret Jerene at Florence Crittenton Services, San Francisco; Donna Cahill at Holy Family Day Home, San Francisco; Renee Herzfeld at 4C's of Alameda County; and Paul Miller at Kidango in Fremont for providing very helpful information and useful feedback on this work.

Table 3.1
Estimated Cost of High-Quality Early Care and Education[50]

Estimated Costs	Hourly Cost Per-Slot	Annual Cost Per-Slot
Infant (0-12 months)	$12.98	$25,967
Toddler (12-24 months)	$9.93	$19,858
Preschool 1 (24-36 months)	$7.77	$15,540
Preschool 2 (36-72 months)	$5.67	$11,349
Assumed Ratios	**Staffing Ratio (Adult to Child)**	**Teacher Ratio (Lead to Asst.)**
Infant (0-12 months)	1 to 3	1 to 3
Toddler (12-24 months)	1 to 4	1 to 2
Preschool 1 (24-36 months)	1 to 6	1 to 1
Preschool 2 (36-60 months)	1 to 8	1 to 1
Assumed Salary and Degree Qualifications	**Full-Year Salary**	**Degree Qualification**
Director/Site Supervisor	$60,000	MA/BA
Lead Teacher	$50,000	BA
Associate or Assistant Teacher	$35,000	AA/CDA
Assumed Percentage Breakdown of Costs	**Percent of Total Budget**	
Teacher Salaries	50.9%	
Benefits & Taxes	15.3%	
Administration	15.0%	
Facilities, Supplies, Support, etc.	18.8%	
Total	100.0%	

Source: Authors' calculations with consultation from local ECE providers (as identified in footnote 49).

High-quality ECE also involves significant costs in addition to compensation for teaching staff. These include administration, fiscal management, and development; staff training,

[50] Assumptions: Staffing ratios and teacher educational qualifications were based on NAEYC accreditation standards and NIEER benchmarks. Lead teachers were assumed to hold a BA degree and be paid a salary comparable to an entry-level public school teacher. Half the assistant teachers were assumed to hold an AA degree, and the other half were assumed to hold a CDA certificate. Teacher salaries and non-personnel costs (assumed to be percentages of personnel costs) were checked against figures reported by the organizations consulted. Health insurance benefits were assumed to be provided to all employees.
Annual estimates of costs per slot are based on an assumption of 2,000 hours (40 hours times 50 weeks). Most children spend fewer than 2,000 hours annually in child care centers, so the estimated annual cost per child would be somewhat lower than the costs per slot. For example, the per child costs for a younger preschool-aged child assumed to spend 1,716 hours in ECE annually would be $13,333 per year.

curriculum development, and non-teaching staff; supplies, services, and facilities. All together, the organizations consulted estimated that these costs represented about one-third of their total budgets.

The cost estimates derived for this report are generally in line with other estimates of the costs of high-quality early care and education. One NIEER study estimates that on a national basis, the cost per child of full-day, year-round, high-quality early care and education would be $12,970.[51] The RAND study of universal preschool in California estimated that the total per-child cost for half-day, school-year pre-kindergarten would be $5,704.[52] At that rate, full-day, full-year ECE would cost $14,803. Finally, the cost per year in the Carolina Abecedarian Project was estimated to be $12,695 per child.

Stepping up to an expanded, high-quality system would also involve other costs.

A significant expansion of access to high-quality early care and education would also require:

- **More trained teachers**. This would mean a major increase in our capacity to educate and train teachers, assistant teachers, site directors, and administrative staff for careers in early care and education. Costs would include both expanding the capacity of institutions of higher education and providing guidance and financial support for the many current ECE workers who cannot afford to pursue higher education on their own.
- **More high-quality facilities**. Few current ECE providers have access to the capital necessary to finance an increase in ECE facilities. Public funding would be necessary for any significant expansion. Chapter 6 of this report discusses ECE teacher preparation and facility development in more detail.

[51] Barnett, S. (2006). *Cost of Providing Quality Preschool Education to America's 3- and 4-Year Olds.* National Institute for Early Education Research. Rutgers University: New Brunswick, NJ.
[52] Karoly, L.A., & Bigelow, J.H. (2005). *The Economics of Investing in Universal Preschool Education in California.* RAND Corporation: Santa Monica, CA.

4 Bay Area Early Care and Education: Need and Affordability

Bay Area working families with young children typically pay thousands of dollars each year for early care and education, and many struggle to find ways to afford it.

Table 4.1 provides data from which an overall sense of scale may be determined for the demand for early care and education in the Bay Area today. [53]

"Children who participate in [high-quality ECE] programs are more likely to have the necessary skills—such as abstract reasoning, problem solving and communication—to meet the demands of tomorrow's workforce." [53]

More than half a million Bay Area children under six live in working families.

Three-fourths of Bay Area children live with both parents. Of all young children living in families with at least one parent working, about one-fourth live in families with incomes below 75% of the state median income (SMI) for families of the same size and type. Thus, these families are eligible for state child care subsidies.

Table 4.1
Young Children and Their Families in the Bay Area

Children Under the Age of Six	Number	Percent
Total Children Under six	566,910	100.0%
Children in Two-Parent Working Families	427,936	75.5%
Children in Single-Parent Working Families	72,710	12.9%
Children Under Six in All Families Below 75% SMI	195,590	34.5%
Children in Working Families below 75% SMI	146,803	25.9%

Source: Authors' calculations from 2005 American Community Survey, IPUMS

[53] Robert Wood Johnson Foundation Commission to Build a Healthier America. (June 2008). *Issue Brief 1: Early Childhood Experiences and Health.*

Table 4.2 focuses on the mothers of these young children. Slightly more than half are working, about 14% of mothers of young children are single parents, and nearly one-third are in families with an income falling below 75% of the state median.

Table 4.2
Mothers of Young Children in the Bay Area

Mothers with Children Under the Age of Six	Number	Percent
Total Mothers	302,667	100.0%
Working	158,051	52.2%
Single Parents	43,362	14.3%
With Income Below 75% SMI	95,272	31.5%

Source: Authors' calculations from 2005 American Community Survey, IPUMS

For many of these families, the cost of early care and education is a large percentage of their total income.

Table 4.3 compares the cost of ECE services in today's marketplace with median family income levels. (For county-by-county details, see Appendix B.)

- Cost of early care and education: Averaging rates among all Bay Area counties (shown in Appendix C), annual rates for ECE are estimated to be
  - $12,807 for center-based infant/toddler care
  - $8,928 for center-based preschool care
  - $7,831 for care in family child care homes (birth through preschool)
  - $8,992 annually and $4.37 per hour[54] as an average for all types of care throughout the Bay Area.
- Family incomes: As shown in Table 4.3, the median income ($93,819) of two-parent families where at least one of the parents works was more than two-and-one-half times that of single-parent working families ($36,578). For families whose income falls below 75% of the state median for a family of four, the median income was only $32,292.

[54] The overall Bay Area Average was weighted to reflect the relative size of each type of care, with preschool center prices receiving proportionately greater weight in the calculation because preschool enrollment is proportionately higher (59.5%) than the other two settings (5.3% and 35.3%).

Table 4.3
The Cost of Child Care Relative to Family Income in the Bay Area

Price of Early Care and Education	Per-Hour Bay Area Average	Annual Bay Area Average
Infant/Toddler Center Based	$6.40	$12,807
Preschool Center Based	$4.46	$8,928
Family Child Care Homes	$3.92	$7,831
Overall Bay Area Average for All Types of Care	*$4.37*	*$8,992*
Family Income		**Median**
Two-Parent Working Families		$93,819
Single-Parent Working Families		$36,578
For Families With Income Below $48,372 (75% of SMI for a family of four)		$32,292
Average Early Care and Education Cost as Percent of Family Income		**As Percent of Median**
Two-Parent Working Families		9.6%
For Single Parent Families		24.6%
For Families With Income below $48,372 (75% of SMI for a family of four)		27.8%

Source: Authors' calculations from 2004–2005 Regional Market Rate Survey of California Child Care Providers and the 2005 American Community Survey, IPUMS

- **Cost of care as percentage of income**: Lower-income families shoulder the greatest economic burden in paying for child care. Using the $8,992 Bay Area average annual cost for all types of care, Table 4.3 shows that on average, ECE costs amount to 9.6% of the relatively higher median income of two-parent working families. For single-parent families, however, ECE costs amount to 24.6% of median income. For families with incomes below 75% of the state median, annual ECE costs per child amount to 27.8% of median income.

These figures show that the cost of child care places an enormous burden on the families that need it most.

5 Current State Assistance: Inadequate to Meet the Need for High-Quality ECE

While the focus of this study is the Bay Area, the issues of quality and affordability are intrinsically linked to California state policy. The state of California currently spends more than $397 million annually in the Bay Area on various ECE subsidies, yet this effort falls short of the actual need in two critical areas:

- Not enough state funding is allocated to cover the number of families who are eligible for assistance.
- The amount of the subsidy per child is not enough to pay for the cost of high-quality care.

California's complex system of ECE subsidies includes varying quality standards and payment levels.

Early care and education for low-income families in California is subsidized through a variety of programs administered by several state and federal agencies.[55]

- **Subsidized child care centers**. Begun in the 1960s and operated by the California Department of Education (CDE), the Title 5 program contracts with licensed child care centers to provide subsidized care. Regulatory standards (requirements for staff qualifications, group size, educational program, developmental assessment of children, parent involvement, and other program quality indicators) at these state-contracted Title 5 centers are the highest in California's subsidized child care and development system (though not as high as the standards described in Chapter 3).
- **Head Start programs** operate under contract with the federal government with standards similar to those of Title 5.
- **California's Alternative Payment Program** which began in the mid-1970s, provides child care vouchers to low-income families who may use them for care at:
    - **Licensed child care centers,** which must meet quality standards as defined in Title 22, which in turn sets up California's child care licensing system. These standards include staff educational requirements that are lower than those in

[55] Whitebook, M., Kipnis, F., & Bellm, D. (2007). *Disparities in California's Child Care Subsidy System: A Look at Teacher Education, Stability, and Diversity*. Center for the Study of Child Care Employment. University of California: Berkeley, CA.

Title 5, health and safety requirements, different definitions of child/staff ratios, and many fewer requirements relating to program quality.

- **Licensed family child care homes,** which must meet different standards than centers under Title 22. The only educational requirement for providers is a 15-hour health and safety course, although many family child care providers are educated in early childhood development and teaching methods.
- **License-exempt providers** (family, friend, and neighbor care), who may care for children in their own family in addition to children from one other family. The only requirements for these providers are a criminal background check and a health and safety self-certification.

In the 1990s, a major infusion of federal dollars increased child care assistance for low-income families who were being pushed to take jobs under the federal welfare reform program. With these funds, the state substantially increased the voucher program without increasing funding for state-contracted centers. Most voucher subsidies today fall under CalWORKs, California's Temporary Assistance to Needy Families (welfare) program.

Only about one-third of eligible Bay Area children receive state child care subsidies.

In Chapter 4 we showed that nearly 196,000 young children in the Bay Area are living in families with incomes under 75% of the state median income. All of these families are income-eligible for state child care subsidies. Of these, about 147,000 (75%) are living in families with at least one parent in the workforce (Appendix C provides county-specific details). Some children whose parents are not currently employed are eligible for subsidized child care for other reasons; for example, parents who are attending school or job training, or are suffering from a disability.

Table 5.1 shows that about 67,000 children received some kind of state or federal subsidy in 2005. Therefore, only about 34%, of the nearly 196,000 children living in families potentially eligible to receive subsidies were actually receiving them.

Table 5.1
Children Under 6 Years Old Receiving State Subsidies in the Bay Area in 2005

Subsidy Program	Total Children Receiving Subsidies
CalWORKs Vouchers	26,659
Other Voucher Programs	2,962
State Contracted Centers (general child care and state preschools)	25,571
Head Start & Early Head Start[56]	11,897
Bay Area Total	*67,089*

Source: California Department of Education, California Department of Social Services and California Head Start Association.

California's quality requirements and subsidy amounts are not sufficient to ensure that children are receiving high-quality early care and education.

Of the Bay Area young children who were receiving subsidized early care and education in 2005, fewer than half were enrolled in Title 5 programs, which currently have the highest quality standards among the subsidized programs. As Table 5.2 shows, more than half were receiving care through the voucher program. Of these, 53% were cared for in license-exempt settings. License-exempt care (or family/friend/neighbor care) is by definition not required to be regulated in California. (Individuals receiving state subsidies are required to complete a criminal background check and a health and safety certification, except for grandparents, aunts, or uncles.) Appendix D provides county-specific estimates of the number of children enrolled in centers with state contracts, children enrolled in Head Start, and children receiving vouchers. It also provides county-specific estimates of the subsidy amounts under these various programs.

[56] Head Start is a direct federal-to-local program and children enrolled in it do not receive additional subsidies from the state for the hours they are in Head Start. They may receive state-subsidized care during other parts of the day or week.

Table 5.2
Children at Centers with State CDE Contracts Compared to Children Receiving Vouchers in 2005

Children in Centers with State Contracts	Number
General Child Care	17,028
Part-Day State Preschool	6,656
Full-Day State Preschool	518
Other Programs	1,369
Bay Area Total	*25,571*

Children Receiving Vouchers	Number
Licensed Center Based Care	6,316
Licensed Family Child Care	7,555
Licensed-Exempt Child Care	15,749
Bay Area Total	*29,62*

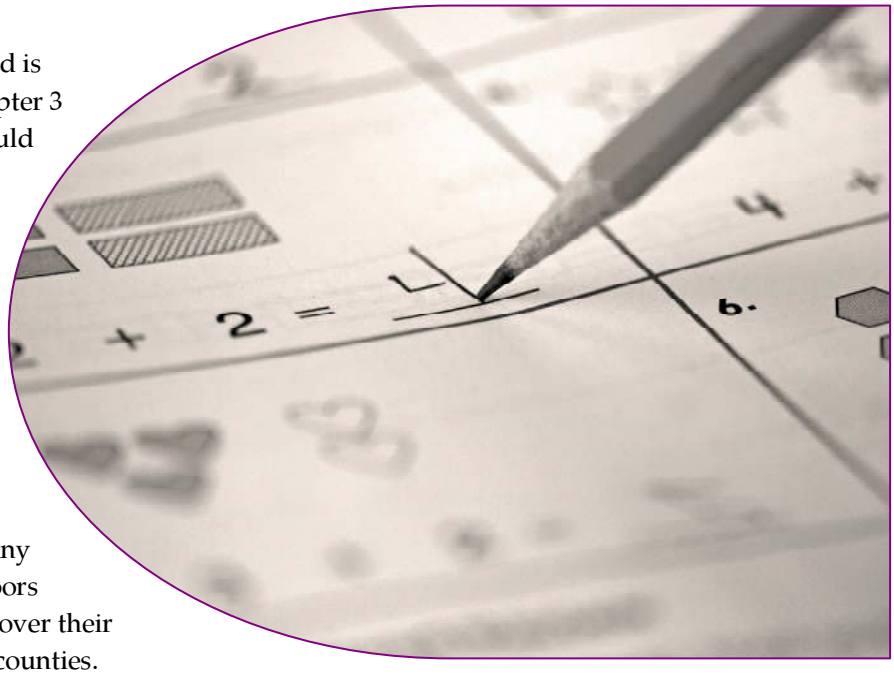
Source: California Department of Education and California Department of Social Services

Table 5.3 shows the average annual per-child subsidy for the different types of state-subsidized care in the Bay Area, compared with the estimated amount required to provide high-quality full-time, full-year early care and education for a two-to-three-year-old child (arrived at by multiplying the $7.77 per hour estimated cost of high-quality care by the 1,716 average annual hours children this age are in center-based care).

Table 5.3
Bay Area Average Annual Per-Child Subsidy Rate Compared to Amount Needed for High Quality

Subsidy Program	Bay Area Average Annual Per-Child Subsidy Rate[57]
Voucher for licensed centers	$10,626
Voucher for licensed family child care	$10,077
Voucher for license-exempt care	$ 9,045
Subsidy for state-contracted center	$ 8,223
Estimated cost of high-quality care	*$13,333*

Source: California Department of Education



The state subsidy for each child is considerably below what Chapter 3 (see Table 3.1) estimates it would take to provide high-quality early care and education. Payments under the voucher program are 68% to 80% of that level, while payments under the state-contracted Title 5 program, with higher quality standards, are only 62% of that level. This contradictory subsidy pattern has forced many Title 5 centers to close their doors because the subsidies do not cover their cost of operation in high-cost counties.

The figures presented here lead to a clear conclusion: Both the number of families receiving subsidies and the level of the subsidies themselves are inadequate to ensure that the children who need it most will receive high-quality early care and education. By failing to invest public dollars up front in high-quality care for low-income children, we not only shortchange these children and their families, but also make it inevitable that we will end up paying far more in the future to deal with the consequences of low public investments in ECE.

[57] The voucher rate is different for each county because it is based on a survey of all child care fees in that county. Subsidies for state-contracted centers are set statewide. Therefore, in high-cost regions like the Bay Area, the subsidies paid through voucher programs, with lower standards, are *higher* than the subsidy for state-contracted centers, with higher standards. Figures are rounded to the nearest dollar.

6 Additional Resource Considerations Associated with an Increased Public Investment in High-Quality Early Care and Education

Although estimating the costs of additional facilities and teacher training is outside the scope of this report, a major expansion in quality early care and education would require significant public investment in two additional areas.

Teacher preparation

If the state were to increase its public investment in high-quality ECE up to the level that is needed, this would dramatically increase the need for teacher recruitment and training. Both pre-service training for additional people entering the field and an upgrading of the educational level of the present early childhood workforce would need to be addressed.

Facilities development

A major increase in public investment in ECE would require the construction, remodeling, and acquisition of many new facilities. Several organizations have provided estimates of the costs required to provide these facilities:

- A study conducted by Advancement Project recently estimated the construction cost of providing 23,000 additional new preschool spaces throughout California to average $19,652 per slot.[58]
- The Low Income Investment Fund (LIIF) has helped fund ECE facility improvement projects.

[58] The Advancement Project. (2007). *California's Preschool Space Challenge: What Preschool Advocates, Parents and Policy-Makers Need to Know*. Los Angeles, CA.

- LIIF data indicated that the construction cost per slot on those projects varied from as low as $7,000 to as high as $25,000. LIIF's detailed cost estimates for two recent child care facility projects in San Francisco showed that the construction cost per slot averaged around $23,000. [59]

[59] Special thanks to Joe Rukus of the Low Income Investment Fund.

7 Policy Recommendations and Conclusions

High-quality early care and education provides the crucial academic, social, and economic foundation for young children to be successful in school and later in life. The benefits for these children, from a purely economic standpoint, are tangible and substantial. These benefits, however, do not stop with the children:

- **Families** whose children have access to high-quality ECE have much greater opportunities to be self-sufficient—to earn more, gain greater skills, and create and maintain stable working lives.
- **Employers** have much to gain, both in increasing the reliability and productivity of the current workforce and in expanding the capacity and productivity of the future workforce.
- **Taxpayers** have much to gain, as many of the benefits of high-quality early care and education come in the form of reduced public expenditures for education, criminal justice, and social services, as well as through increased tax revenue.
- **Society as a whole** has much to gain, because a better prepared future workforce will increase productivity, innovation, and prosperity for the whole region.

> "Ensuring that children have positive experiences prior to entering school is likely to lead to better outcomes than remediation programs at a later age, and significant up-front costs can generate a strong return on investment."
>
> —Center on the Developing Child, Harvard University[60]

These benefits more than offset the additional expenditures required to publicly invest in high-quality ECE.

The following recommendations are based on specific research findings contained in this report:

- **Increase public investment in high-quality ECE for all children ages 0 to 5.** The aggregate net benefits for investing in high-quality ECE offer one of the highest returns of any public investment. High-quality early care and education clearly saves taxpayers more money than it costs.

[60] *A Science-Based Framework for Early Childhood Policy*, retrieved April 18, 2008 from www.developingchild.harvard.edu. Center on the Developing Child. Harvard University: Cambridge.

- **Invest first in children from low-income families; provide subsidized ECE to all eligible children**. All children stand to gain from public investments in high-quality ECE, but those from families with incomes below 75% of the state median income have the most to gain. Public investment in ECE should start with allocating scarce budget dollars to where they will have the greatest educational, economic, and fiscal impact.

- **Invest amounts sufficient to support high-quality care**. Many early care and education providers currently struggle to provide high-quality care within the limits of what families can afford to pay or the state provides in child care subsidies. Many are not meeting the nationally-recognized standards that lead to high performance outcomes. Because high quality is necessary in order to realize high returns, state subsidies should be increased to the amount necessary to provide quality programs. The state should design financial incentives to foster improvements in quality.

- **Ensure that early care and education meets the needs of working families**. Many families struggle to meet the expenses of ECE at current market prices, some devoting 25% or more of their income to care for young children. The lack of consistent and high-quality care interferes with many parents' ability to get and keep jobs that enable them to support their families, and lowers their productivity on the job. Working families need access to reliable, high-quality, full-time, full-year ECE.

- **Educate, train, and adequately compensate the ECE workforce**. Early childhood educators in the Bay Area are underpaid and many are undereducated. Only through raising salary levels can we hope to attract more qualified, educated professionals to enter and remain in this field. Thousands of new teachers must be educated and thousands of current educators must upgrade their skills. State institutions of higher learning need to prepare to meet this critical need.

- **Build and maintain high-quality facilities**. New and current ECE providers will need financial assistance to build or acquire the high-quality facilities necessary for providing high-quality care. Evidence presented in Chapter 6 showed that the cost per slot of new or rehabilitated facilities can easily be $25,000 or higher, and this is above the ability of most ECE providers to finance out of their own operating revenues.

Early care and education is an investment in the future of California and the Bay Area. As we move through the 21st century, the business community will require an even more highly-educated and skilled workforce than it does today. The cost of allowing even some children to fail in school and later in life is unacceptably high. One of the surest ways to avoid the economic costs and lost opportunities such failure brings is to make sure that all children enter kindergarten fully prepared to succeed. High-quality early care and education has been shown time and again to be one of the most cost-effective ways to guarantee that more of our children are able to learn the skills they will need for success in school and later life.

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Appendix A

The Economic Impact of the ECE Sector on the Bay Area Economy

This appendix describes methods used to derive the estimates contained in Table 1.1.

Raw data came from a series of economic impact studies conducted for each county by the National Economic Development and Law Center (NEDLC), now called Insight Center for Community Economic Development. Each NEDLC study contains a wealth of detailed information on the quantities and kinds of ECE services currently provided in the county under study, as well as the total number of child care slots available in that county. The most recent of these studies was conducted for San Francisco County and was released in January 2006.[61] This and other data were used by NEDLC to estimate the level of economic activity (gross receipts) generated by the formal child care industry in each of the counties under study. They also estimated the current number of full time equivalent jobs in ECE.

One of the key contributions of the NEDLC economic impact studies is the compilation of highly detailed service provider information from a variety of different sources. In each county, NEDLC researchers worked carefully with local agencies to come up with accurate counts of licensed family child care homes, licensed child care centers and pre-schools, Head Start programs, licensed centers fully funded by California Department of Education Child Development Division, special education pre-school programs, and license-exempt providers who receive voucher payments. Market-rate data for private providers is combined with government expenditure data for publicly-funded programs to make the gross receipts estimates.

Unfortunately, no such similar study has been conducted for the Bay Area region as a whole, and since the individual county-specific studies were conducted over a span of 10 years, the data from each study is not directly comparable without making adjustments. A new economic impact study for the entire Bay Area using newly collected data would be useful. Such an analysis, however, is beyond the scope of the present report. We did, however, make some simple adjustments to the NEDLC findings to make the figures more comparable. We also adjusted for the missing Napa data using conventional estimation techniques.

In calculating these estimates, original NEDLC estimates of gross receipts and employment in the eight counties were adjusted for the impact of inflation using the Consumer Price Index so that each county's gross receipts are reported in the

[61] National Economic Development and Law Center. (2006). "The Economic Impact of the Child Care Industry in the City and County of San Francisco." Oakland, CA. NEDLC conducted earlier economic impact studies for the following counties: Contra Costa (2003), Alameda (2002), Santa Clara (2002), Solano (2002), Sonoma (2002), Marin (1998), and San Mateo (1997).

inflation-adjusted 2005 prices.[62] California Department of Finance county population estimates were then used to adjust both gross receipts and employment data from each county to reflect whatever population changes had occurred since the year the original data was collected.[63] Finally, the proportion of each county's licensed child care slots from the California Child Care Resource and Referral Network Portfolio were used to estimate the gross receipts and employment for Napa County.[64] The estimates provided in Table 5.3, while giving some sense of the overall size of the formal child care industry in the Bay Area today, should in no way be viewed as a substitute for a complete and rigorous economic impact analysis for the entire Bay Area region using newly collected data and using a methodology similar to the one employed in the county-specific NEDLC studies.

[62] U.S. Department of Commerce, Bureau of Labor Statistics. *Consumer Price Index*. Source: http://www.bls.gov/cpi/home.htm .
[63] California Department of Finance, Demographics Research Unit. E-6 *County Population Estimates*. Source: http://www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/ReportsPapers.asp .
[64] California Child Care Resource and Referral Network. (2006). "The 2005 California Child Care Portfolio." San Francisco, CA.

Appendix B

County-level data on children under six and their families.

This appendix provides county-level estimates corresponding to the Bay Area demographic estimates presented in Chapter 4.

Table B.1
Children in the Bay Area Under the Age of Six, by Age* and County

County	0–2 years Old	Percent of Total	3–5 years Old	Percent of Total	Total Children	Percent of Total
Alameda	66,847	50.0%	66,872	50.0%	133,719	23.6%
Contra Costa	38,421	46.4%	44,469	53.6%	82,890	14.6%
Marin	7,624	49.9%	7,640	50.1%	15,264	2.7%
Napa	4,534	47.7%	4,962	52.3%	9,496	1.7%
SF	23,738	54.1%	20,152	45.9%	43,890	7.7%
San Mateo	29,211	47.7%	32,004	52.3%	61,215	10.8%
Santa Clara	76,874	50.2%	76,113	49.8%	152,987	27.0%
Solano	18,459	55.3%	14,947	44.7%	33,406	5.9%
Sonoma	16,025	47.1%	18,018	52.9%	34,043	6.0%
Bay Area	*281,733*	*49.7%*	*285,177*	*50.3%*	*566,910*	*100.0%*

Source: Compiled by authors from American Community Survey 2005, IPUMS
*Age-groups are defined as infants (0–2 yrs), pre-school (3–5 yrs)

Table B.2
Children in the Bay Area in Families with Income Under 75 Percent of State Median Income*, by Age and County**

County	0–2 years Old	Percent of total	3–5 years Old	Percent of total	Total Children	Percent of total
Alameda	26,429	50.2%	26,267	49.8%	52,696	26.9%
Contra Costa	12,580	46.2%	14,635	53.8%	27,215	13.9%
Marin	1,201	40.0%	1,803	60.0%	3,004	1.5%
Napa	1,927	51.1%	1,846	48.9%	3,773	1.9%
SF	8,098	52.8%	7,247	47.2%	15,345	7.8%
San Mateo	8,935	44.7%	11,035	55.3%	19,970	10.2%
Santa Clara	23,343	51.7%	21,826	48.3%	45,169	23.1%
Solano	7,942	56.4%	6,128	43.6%	14,070	7.2%
Sonoma	6,763	47.1%	7,585	52.9%	14,348	7.3%
Bay Area	*97,218*	*49.7%*	*98,372*	*50.3%*	*195,590*	*100.0%*

Source: Compiled by authors from American Community Survey 2005, IPUMS
*Incomes are adjusted for family size
** Age-groups are defined as infants (0–2 yrs), pre-school (3–5 yrs)

Table B.3
Children in the Bay Area in Families with Income Under 75 Percent of State Median Income*, by County and Parent's Labor Force Participation

County	At least 1 parent in the labor force	Percent of total	No parent in the labor force**	Percent of total	Total below 75 %of SMI	Percent of total
Alameda	36,039	68.4%	16,657	31.6%	52,696	26.9%
Contra Costa	21,947	80.6%	5,268	19.4%	27,215	13.9%
Marin	2,522	84.0%	482	16.0%	3,004	1.5%
Napa	3,099	82.1%	674	17.9%	3,773	1.9%
SF	11,319	73.8%	4,026	26.2%	15,345	7.8%
San Mateo	16,910	84.7%	3,060	15.3%	19,970	10.2%
Santa Clara	33,936	75.1%	11,233	24.9%	45,169	23.1%
Solano	8,967	63.7%	5,103	36.3%	14,070	7.2%
Sonoma	12,064	84.1%	2,284	15.9%	14,348	7.3%
Bay Area	*146,803*	*75.1%*	*48,787*	*24.9%*	*195,590*	*100.0%*

Source: Compiled by authors from American Community Survey 2005, IPUMS
*Incomes are adjusted for family size
** This category includes children that do not live with parents

Appendix C

Average Prices of ECE Services in the Bay Area

This appendix describes how the average prices of ECE services in the Bay Area, shown in Table 4.3 were calculated.

Every two years, California is required by federal statute to conduct a regional market rate survey (RMR) to determine current market prices charged by ECE providers to families for child care in each county.[65] RMR surveys like California's are conducted in each state, and provide the single best source of information on market prices charged by ECE providers. They are widely used in economic impact reports.

The Department of Education uses RMR survey information to help in determining the rates paid under the voucher program to child care centers, family child care providers, and license-exempt providers. Meanwhile the rate paid to contracted (Title 5) child care centers, called the Standard Reimbursement Rate, is set by the Department of Education statewide.[66] This is the reason why, in high-cost counties, payment under the voucher program, with lower standards, is higher than payment under the Title 5 program.

Table C.1
Mean Annual Prices Per-Child for Full Time ECE Services by County

	Child Care Centers		Family Care
County	Infant/ Toddlers	Preschool Aged	Ages 0–5
Alameda	$12,215	$8,499	$7,571
Contra Costa	$11,704	$8,129	$7,394
Marin	$14,301	$10,371	$9,226
Napa	$10,154	$6,947	$7,661
San Francisco	$12,858	$9,469	$8,875
San Mateo	$13,957	$9,761	$8,519
Santa Clara	$13,918	$9,789	$8,428
Solano	$10,365	$7,002	$6,522
Sonoma	$10,273	$7,461	$7,547
Bay Area Average	*$12,807*	*$8,928*	*$7,831*

Source: Authors calculations from California Department of Education, 2004–2005 Regional Market Survey (RMR) and California Child Care Resource & Referral Network, 2005 California Child Care Portfolio.

Table C.1 presents the mean annual prices per child for full-time, full-year ECE for three different levels of ECE services in each county from the RMR survey. As can be seen, mean prices for each type of service vary considerably, and are generally highest in Marin

[65] California Department of Education. (2006). "2004–2005 Regional Market Rate Survey of California Child Care Providers." Sacramento, CA.

[66] This distinction was clarified in a conversation between the authors and Deborah Lindley, Manager of the CalWORKs/Alternative Payments Program for the Child Development Fiscal Services Unit of the Department of Education. Ms. Lindley is the agency representative responsible for oversight of the survey.

County, and lowest in Napa County. Table C.1 also presents the overall weighted Bay Area average for each type of service. The weighted average was used to reflect the fact that each county has a different number of children in ECE. For example, according to California Child Care Resource and Referral Network data, Santa Clara had 23,090 preschool center based slots in 2005, whereas Napa County had 2,017. Using a weighted average allowed the authors to take into account the fact that Santa Clara county had more than 10 times as many preschool aged children in centers as Napa county. In calculating the weighted average, the authors used the proportion of each county's ECE slots relative to the entire number of ECE slots in the Bay Area as weights. For example, Santa Clara's proportion of preschool slots was 23.5% of the Bay Area total, whereas Napa's proportion was 2.1%.

Table C.2
Mean Hourly Prices Per-Slot For Full Time ECE Services By County

	Child Care Centers		Family Care
County	**Infant/ Toddlers**	**Preschool Aged**	**Ages 0–5**
Alameda	$6.11	$4.25	$3.79
Contra Costa	$5.85	$4.06	$3.70
Marin	$7.15	$5.19	$4.61
Napa	$5.08	$3.47	$3.83
San Francisco	$6.43	$4.73	$4.44
San Mateo	$6.98	$4.88	$4.26
Santa Clara	$6.96	$4.89	$4.21
Solano	$5.18	$3.50	$3.26
Sonoma	$5.14	$3.73	$3.77
Bay Area Average	*$6.40*	*$4.46*	*$3.92*

Source: Authors calculations from California Department of Education, 2004–2005 Regional Market Survey (RMR) and California Child Care Resource & Referral Network, 2005 California Child Care Portfolio.

Table C.2 presents the mean hourly prices per slot for full-time, full-year ECE for three different levels of ECE services in each county from the RMR survey. The figures in Table C.2 are based on the assumption that ECE providers were in operation 2,000 hours per year (40 hours per week times 50 weeks). Each per-hour estimate divides the annual price per child found in Table C.1 by the assumed 2,000 annual hours of operation. For example, Table C.1 shows that in Alameda County, the average annual price for center-based preschool care was $8,499. Dividing this by 2,000 generates the $4.25 hourly estimate shown in Table C.2. The rest of the figures in the table were calculated in a similar fashion, and the overall Bay Area average in each category was calculated as a weighted average using a method identical to that in Table C.1.

Finally, the authors calculated the overall Bay Area weighted average for all types of care to be $8,992, as presented in Table 4.3 in Chapter 4. This was also a weighted average, reflecting the fact that relatively more ECE slots in the Bay Area are center-based preschool slots (59.5%), and relatively fewer are center-based infant/toddler slots (5.3%) or family child care homes (35.3%).

Appendix D

Bay Area ECE enrollment by county

This appendix shows county-level data for enrollment in the various types of ECE programs described in Chapter 5.

Table D.1
Children Receiving Vouchers by Program by County

County	CalWORKs Stage 1	CalWORKs Stage 2	CalWORKs Stage 3	Non-CalWORKs	Total
Alameda	2,529	1,776	2,329	737	7,371
Contra Costa	661	1,902	1,647	468	4,678
Marin	216	183	162	62	623
Napa	74	162	141	42	419
San Francisco	945	828	1,089	318	3,180
San Mateo	120	619	515	139	1,393
Santa Clara	1,328	3,375	1,834	726	7,263
Solano	543	1,232	818	288	2,881
Sonoma	228	812	591	181	1,812
Bay Area Total	*6,644*	*10,889*	*9,126*	*2,962*	*29,621*
Percent of Total	*22.4%*	*36.8%*	*30.8%*	*10.0%*	*100.0%*

Source: California Department of Education, and California Department of Social Services

Table D.2
Voucher Payments by Program by County

County	CalWORKs Stage 1	CalWORKs Stage 2	CalWORKs Stage 3	Non-CalWORKs	Total
Alameda	$16,937,478	$11,413,518	$14,974,629	$4,813,958	$48,139,583
Contra Costa	$3,768,729	$10,534,204	$9,116,980	$2,602,213	$26,022,126
Marin	$1,570,709	$1,272,471	$1,036,575	$431,084	$4,310,839
Napa	$412,303	$929,211	$680,836	$224,706	$2,247,056
San Francisco	$7,107,875	$6,392,798	$7,579,118	$2,342,199	$23,421,990
San Mateo	$2,378,248	$3,786,648	$3,439,344	$1,067,138	$10,671,378
Santa Clara	$8,215,051	$19,838,028	$11,384,650	$4,381,970	$43,819,699
Solano	$3,260,352	$6,724,525	$4,938,554	$1,658,159	$16,581,590
Sonoma	$1,244,042	$4,740,291	$3,057,348	$1,004,631	$10,046,312
Bay Area Total	*$44,894,787*	*$65,631,694*	*$56,208,034*	*$18,526,057*	*$185,260,572*
Percent of Total	*24.2%*	*35.4%*	$14,974,629	$4,813,958	$48,139,583

Source: California Department of Education, and California Department of Social Services

Table D.3
Children Enrolled in Child Care Centers with CDE State Contracts by County

County	Infant/ Toddlers	Preschool Aged	County Total
Alameda	832	5,257	6,089
Contra Costa	479	3,740	4,219
Marin	59	370	429
Napa	89	340	429
San Francisco	591	3,667	4,258
San Mateo	240	2,352	2,592
Santa Clara	804	4,397	5,201
Solano	152	975	1,127
Sonoma	201	1,026	1,227
Bay Area Total	*3,446*	*22,101*	*25,571*
Bay Area Percent	*13.5%*	*86.4%*	*100.0%*

Source: California Department of Education.

Table D.4
Amount Paid to Child Care Centers with CDE State Contracts by County

County	Child Care Centers	Part-Day Preschools	Full Day Preschools	County Total
Alameda	$53,143,383	$8,275,089	$1,556,758	$62,975,230
Contra Costa	$13,162,401	$6,935,303	$919,443	$21,017,147
Marin	$3,947,369	$479,413	$356,784	$4,783,566
Napa	$2,245,173	$419,627	$144,630	$2,809,430
San Francisco	$40,740,372	$3,940,469	$1,620,455	$46,301,296
San Mateo	$12,403,753	$4,233,102	$364,810	$17,001,665
Santa Clara	$35,573,840	$11,082,942	$286,478	$46,943,260
Solano	$3,169,491	$1,601,973	$166,722	$4,938,186
Sonoma	$3,791,750	$1,833,973	$148,086	$5,773,809
Bay Area Total	*$168,177,532*	*$38,801,891*	*$5,564,166*	*$212,543,589*
Percent of Total	*77.3%*	*17.8%*	*2.6%*	*100.0%*

Source: California Department of Education.

Table D.5
Children Receiving Vouchers by Type of Care by County

	Licensed Care			
County	**Center-Based Care**	**Family Child Care**	**License-Exempt Family Child Care**	**County Total**
Alameda	1,538	2,004	3,830	7,371
Contra Costa	810	1,247	2,621	4,678
Marin	269	154	199	623
Napa	96	215	108	419
San Francisco	956	183	2,041	3,180
San Mateo	309	225	859	1,393
Santa Clara	1,832	1,630	3,801	7,263
Solano	174	1,318	1,388	2,881
Sonoma	332	578	902	1,812
Bay Area Total	*6,316*	*7,555*	*15,749*	*29,620*
Bay Area Percent	*21.3%*	*25.5%*	*53.2%*	*100.0%*

Source: California Department of Education, and California Department of Social Services.

Table D.6
Children Enrolled in Child Care Centers with State CDE Contracts by Type of Program by County

County	**General Child Care**	**Full-Day State Preschool**	**Part-Day State Preschool**	**Other Programs**	**County Total**
Alameda	4,302	1,313	97	325	6,037
Contra Costa	1,909	1,509	84	192	3,694
Marin	448	58	26	66	598
Napa	259	112	13	15	399
San Francisco	4,469	663	174	137	5,443
San Mateo	1,241	894	44	115	2,294
Santa Clara	3,094	1,424	32	317	4,867
Solano	682	250	30	153	1,115
Sonoma	624	433	18	49	1,124
Bay Area Total	17,028	6,656	518	1369	25,571
Bay Area Percent	*66.6%*	*26.0%*	*2.0%*	*5.4%*	*100.0%*

Source: California Department of Education.

Table D.7
Children Enrolled in Head Start Centers by County

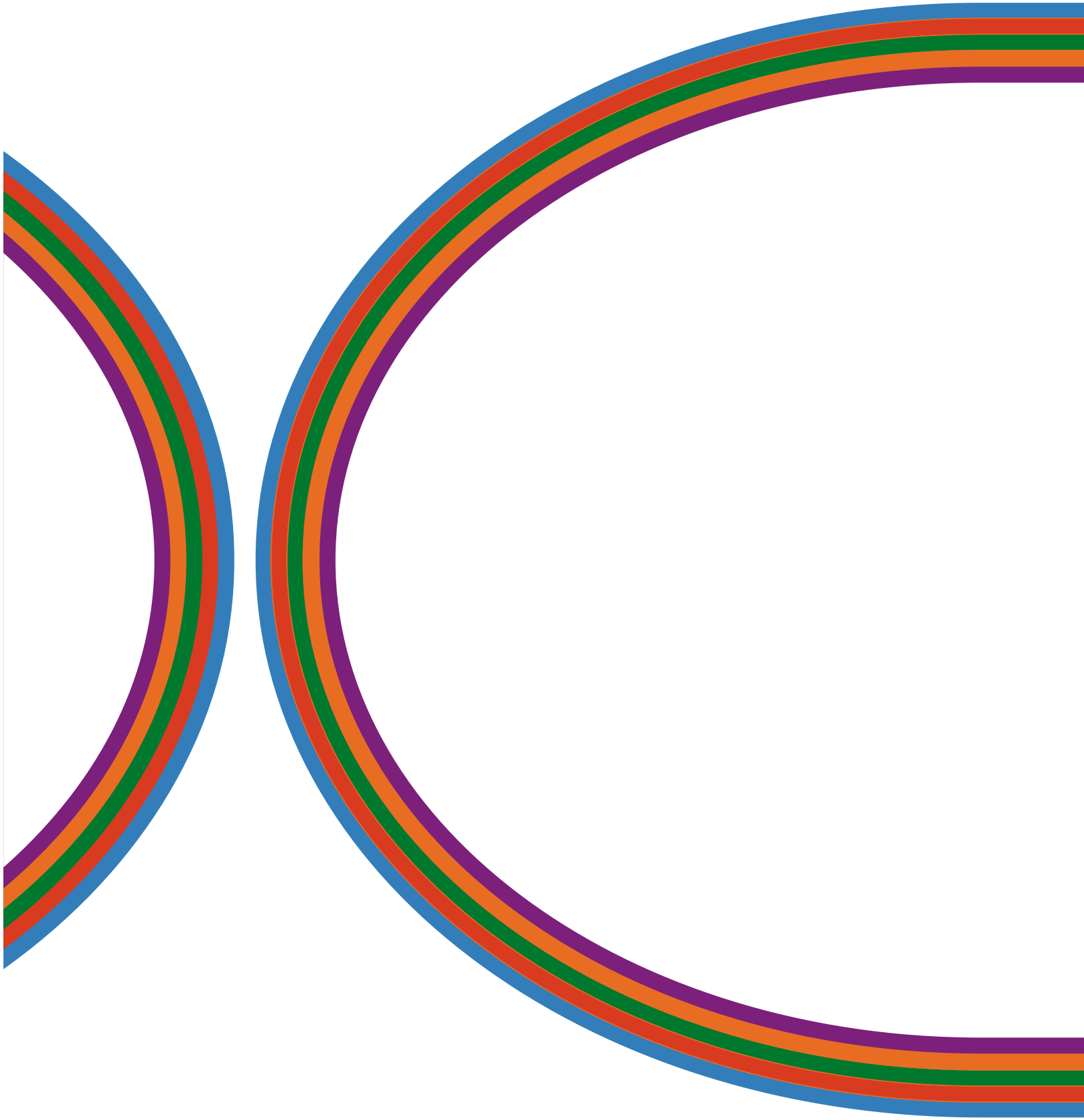
County	Head Start	Early Head Start	Total
Alameda	3074	421	3,495
Contra Costa	1826	214	2,040
Marin	241	99	340
Napa	274	28	302
SF	1359	184	1,543
San Mateo	632	98	730
Santa Clara	2150	88	2,238
Solano	621	36	657
Sonoma	520	32	552
Bay Area Total	*10,697*	*1,200*	*11,897*
Percent of Total	*89.9%*	*10.1%*	*100.0%*

Source: California Head Start Association.

Table D.8
Amounts Paid by Federal Government to Head Start Centers by County

County	Head Start	Early Head Start	Total
Alameda	$25,698,640	$4,723,620	$30,422,260
Contra Costa	$15,265,360	$2,401,080	$17,666,440
Marin	$2,014,760	$1,110,780	$3,125,540
Napa	$2,290,640	$314,160	$2,604,800
San Francisco	$11,361,240	$2,064,480	$13,425,720
San Mateo	$5,283,520	$1,099,560	$6,383,080
Santa Clara	$17,974,000	$987,360	$18,961,360
Solano	$5,191,560	$403,920	$5,595,480
Sonoma	$4,347,200	$359,040	$4,706,240
Bay Area Total	*$89,426,920*	*$13,464,000*	*$102,890,920*
Percent of Total	*86.9%*	*13.1%*	*100.0%*

Source: California Head Start Association.



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