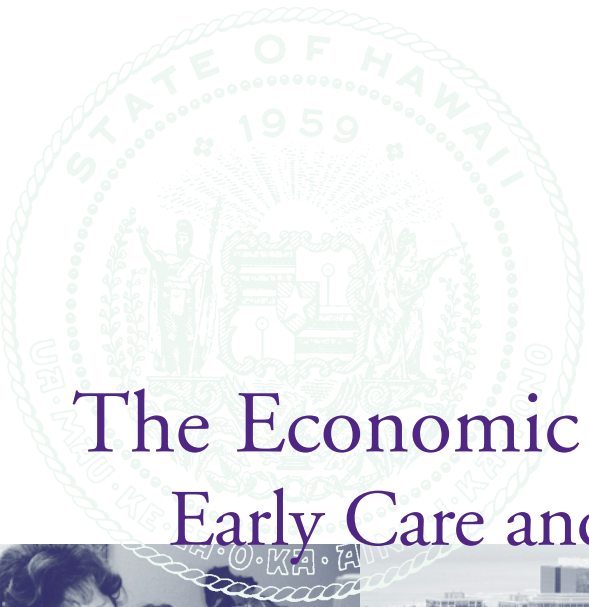


MARCH 2005



The Economic Impact OF THE Early Care and Education Industry *in Hawai'i*



PREPARED BY THE

NATIONAL ECONOMIC DEVELOPMENT AND LAW CENTER



Background

THE ECONOMIC IMPACT OF THE EARLY CARE AND EDUCATION INDUSTRY IN HAWAII

The National Economic Development and Law Center (NEDLC), with a grant from the W.K. Kellogg Foundation, is working with states across the nation to produce reports and recommendations that quantify the direct economic effects of the early care and education industry on the economy of the state. In addition, the reports help to build local partnerships aimed at increasing the industry's capacity to respond to the shifting early care and education needs of America's families. For the Hawaii report, NEDLC partnered with Good Beginnings Alliance (www.goodbeginnings.org) to form an Advisory Board of Hawaii's leaders in the fields of business, government, early care and education, and economic development.

GOOD BEGINNINGS ALLIANCE

Good Beginnings is a statewide public/private initiative. Working in partnership with families, communities, policy makers, early childhood providers, and advocates, Good Beginnings:

- Shapes public will and public policy
- Mobilizes action, and
- Maximizes resources

to ensure that all of Hawaii's keiki are safe, healthy and ready to succeed.



NATIONAL ECONOMIC DEVELOPMENT AND LAW CENTER

The National Economic Development and Law Center, established in 1969, is a non-profit public interest law and planning organization that specializes in community economic development. It works in collaboration with community organizations, private foundations, corporations and government agencies to build the human, social, and economic capacities of low-income communities and their residents. NEDLC helps to create strong, sustainable community institutions that can act as "change agents" and an effective local infrastructure for their support.



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3Point is a public interest research and consulting company based in Honolulu, Hawaii. It works to cultivate the organizational capacities, political strategies, and analytical rigor required to create public value. 3Point provided research support and helped craft recommendations for this report.

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SECTION ONE:

Introduction

OVERVIEW

The early care and education industry in Hawai'i encompasses a range of programs that are part of the formal economy and which are designed to nurture, support, enrich, and educate children from birth through age 12 outside of traditional kindergarten through 12th grade (K-12) education. Licensed center-based programs, family child care homes, after-school programs, public pre-schools (County-, State-, and Federal-funded programs), private pre-schools, and Head Start child development centers are all considered part of the early care and education industry (ECE industry). The industry has two main functions, both of which have changed significantly over time, and which link it to the economy.

The early care and education (ECE) industry includes programs that are part of the formal economy, including full-day and part-day programs, Head Start, public and private pre-schools, family child care homes, and centers.

First, the ECE industry provides developmentally appropriate learning opportunities for children. Quality early care and education programs develop core skills and competencies that prepare children for success as they proceed from kindergarten to twelfth grade (K-12) and into adulthood. Positive experiences in early care and education settings can reduce the likelihood of a range of negative outcomes, particularly for children of low income. The research and public will surrounding the education and developmental needs of young children have increased dramatically over the last two decades. Many more parents, government officials, and business leaders now demand quality early education as part of the total educational experience that Hawai'i offers its children.

The second major function of the ECE industry is in enabling parents to work and to take advantage of educational opportunities which further their careers. Historically, parents were solely responsible for daytime care and education for their own young children. Single parents and families with two working parents were rare. In those families who did have two working parents or a single working parent, care and education was generally entrusted to relatives, neighbors, and friends. Today, the picture is very different. One in ten labor market participants in Hawai'i has a child under the age of six, and 62 percent of children under six live in families in which every parent in the household works.¹ Today, Hawai'i has more than 540 licensed early care and education center-based programs, more than 450 licensed family homes. Together, these programs and providers licensed facilities can serve more than 30,000 children.² There are also hundreds of formal, license-exempt providers that are at least partially funded through public dollars which serve another 30,000 children.

As a result of these two shifts, the role of the industry in the economy has transformed. The average annual cost for full-time licensed care by different age groups and types of care ranges from more than \$2,400 per year for before- and after-school programs for school-age children to more than \$8,000 for an early care and education center-based program for an infant.³ The ECE industry is a definite component of the economic infrastructure of the state, which means that the industry is a driver of the economy. The ECE industry financially benefits the economy in three ways:

- Provides nearly 9,400 jobs and generates more than \$240 million in revenue
- Facilitates the success of other industries in the state by enabling parents to be part of an educated and productive workforce which values learning and updating skills

¹ U.S. Census Bureau, *Census 2000*.

² PATCH data, 2003-04. Early care and education programs could be within one establishment; for example, a licensed infant-toddler program may be next door to a licensed pre-school program.

³ Based on market rate information from PATCH, Hawai'i's child care resource and referral agency, 2004.

- Enables future economic success in Hawai'i by assisting in the preparation of young children for opportunities in the new economy and attracting business to Hawai'i's skilled workforce.

JOB CREATION AND REVENUE GENERATION

The ECE industry is an industry in Hawai'i in its own right. While the economic effects of this industry have often been overlooked, research in this report demonstrates that early care and education is an income-generating, job-creating industry, contributing more in annual revenue than the scientific research and design industry and three-quarters of the sightseeing industry. In addition, the total number of employees in early care and education is greater than covered employees in business services or real estate offices in the state.⁴

ONGOING TRAINING AND EDUCATION

The ECE industry facilitates the success of other industries in the state by enabling parents to be part of a productive workforce. Affordable early care and education options encourage young Hawai'i workers with children to remain in the workforce and enable workers presently employed to seek additional educational training. Employers have found correlations between early care and education benefits and attracting and retaining new employees and reducing employee turnover and absenteeism.⁵ It makes sense. Employees who are not worried about their children's well-being are free to focus on their work and be more productive. Employees without affordable early care and education options are like those without quality housing or transportation. They experience barriers to working. For low-income families, programs that are made affordable through government assistance are vital to continued participation in the labor force.

ENSURING A STRONG FUTURE ECONOMY

Quality early care and education programs enable future economic success in Hawai'i by preparing young children for workforce opportunities. Recent research on early brain development demonstrates that, far from being a luxury, early care and education is a vital service, improving children's health, school readiness, and future employment.⁶ The quality of early education opportunities is linked to positive outcomes in school for children in all income brackets, though studies have shown particularly striking findings in children from low-income families. Three separate longitudinal studies of targeted, intensive intervention programs for low-income children indicate significant long-term outcomes in areas such as grade repetition and special education needs, higher educational attainment, and home ownership in adulthood. Many of the outcomes reduce future public spending, in such areas as K-12 education, criminal justice and welfare assistance. This results in a 12 percent rate of public return on investment. Based on its public rate of return, quality early childhood education is one of the strongest candidates for increased public investment.⁷ As part of a seamless education system, quality early childhood programs also play a role in enabling the state to attract and retain new businesses and succeed in the future economy.

⁴ See Section Three for further discussion of results and methodology. Employment values for early care and education are based on the comprehensive methodology in this report. Other industry's employment values are from the Covered Employment and Wages survey, which only includes employees who are covered under unemployment insurance.

⁵ See Section Four of this report for more information.

⁶ J.P. Shonkoff and D.A. Phillips, Editors. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington, D.C.: National Academies Press, 2000.

⁷ Art Rolnick and Rob Grunewald. *Early Childhood Development: Economic Development with a High Public Return*. Fedgazette. Minneapolis, MN: Federal Reserve Bank of Minneapolis, January, 2003.

SCOPE OF THE REPORT

This report analyzes the significance of the ECE industry to the economy. Specifically, it quantifies the direct economic impact that the ECE industry currently has on the economy of Hawai'i through gross receipts and direct employment.

In addition, the report:

- Describes demographic and economic trends and their implications for the ECE industry
- Discusses economic development and business benefits of early care and education, including bottom-line returns for individual Hawai'i businesses and returns on targeted public investment
- Provides recommendations to build the capacity and sustainability of quality, affordable early care and education in Hawai'i

This report quantifies the direct economic impact that the early care and education industry currently has on the economy of Hawai'i through gross receipts and employment.

Understanding the interaction between the supply of quality, affordable early care and education and economic growth will improve the efficiency of investments in the industry can help to increase Hawai'i's economic competitiveness.

DEFINING THE ECE INDUSTRY

For the purposes of this report, early care and education includes all establishments and individuals who are a part of the formal economy (i.e., are subject to taxes, state regulations, etc.) and who provide care and education for children between birth and age 12 outside of traditional K-12 education.

All licensed early care and education programs are part of the formal economy, and are included in this report. Licensed early care and education meets standards set by the state legislature and regulated by the Hawai'i Department of Human Services (DHS).⁸ Licensed establishments include most early care and education centers and many family child care homes. DHS maintains comprehensive lists of all licensed programs and the state's resource and referral agency tracks their cost and enrollment information.

Other early care and education programs are legally license-exempt, although they are still expected to meet health and safety standards. Those that can be tracked as part of the formal economy are included in this report. Programs operated by public or private elementary school systems or secondary school units, and those operating on federal government premises are not required to hold a license with DHS, but do have comprehensive information on their gross receipts and expenditures. People caring for no more than two children from another family, and those providing care in the family's home, such as an au pair or nanny, are license-exempt. Although these types of license-exempt care are often used and thus also add to the economy, it is more difficult to ascertain their impact. Providers that receive government payments for direct services to children are included because the public dollars they receive are well documented. However, the majority of license-exempt arrangements are not possible to capture, and are not included in this report.

Hawaii's children are blessed by a rich cultural emphasis that extended families place upon their development. In addition to ohana care, a broad network of informal parent participation programs, called Play+Learn groups, has developed in communities across the state. These programs support the professional development of parents and other caregivers, while strengthening child development. Neither ohana care nor Play+Learn groups are included in this estimate. By excluding the majority of ohana and license-exempt care, this report's findings are underestimates of the total gross receipts and direct employment of the ECE industry.

This report does not include care and education arrangements that cannot be tracked economically. Many nannies, babysitters, and extended ohana care arrangements are not included in this report.

⁸ PATCH. *Resources for Families: Child care Options*. Hawai'i Department of Children and Family Services. <http://www.patchHawaii.org/families/childcareOptions.asp>. Retrieved August 20, 2004.

OUTLINE OF THE REPORT

Following this introduction, Section Two describes the demographic and economic profile of the state and the implications for the ECE industry. Section Three analyzes the overall economic impacts of the ECE industry as measured by both industry earnings and employment and current levels of government investment. Section Four explores the links between early care and education, business, and economic development, and Section Five considers future implications for the state's economy, and makes conclusions and recommendations.

SECTION TWO:

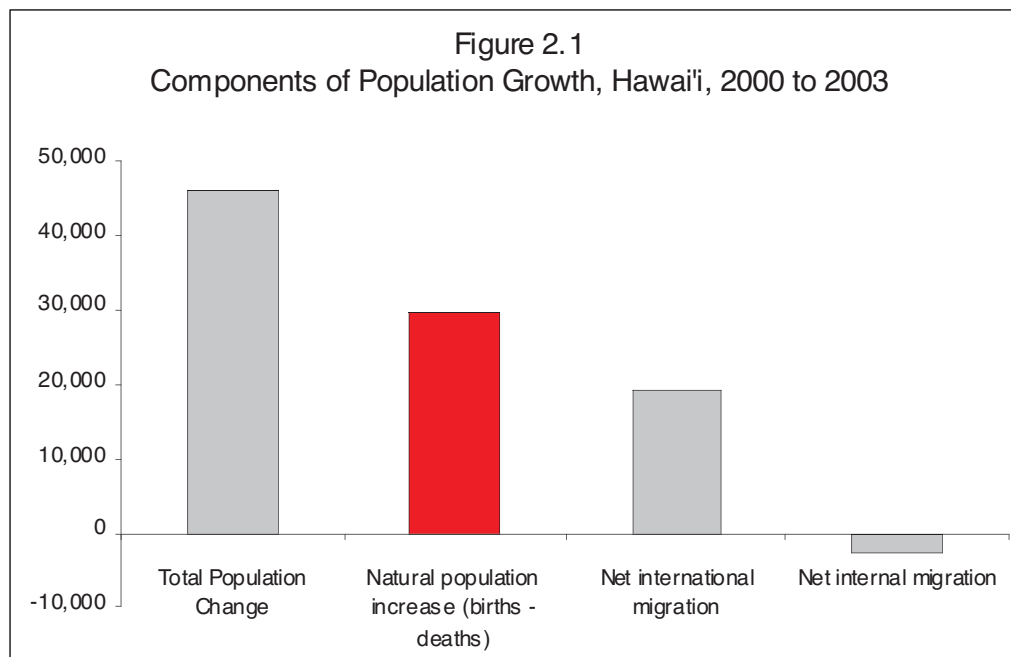
Demographic and Economic Profile *of Hawai'i*

Hawai'i has unique demographic and economic trends. These have significant implications for early care and education programs for its young and school-age children. This section gives a brief overview of those trends, including population shifts, labor force characteristics, employment demands, and the cost of living in the state. It also discusses the implications for the ECE industry.

POPULATION

POPULATION GROWTH

Despite a population growth that was slower than national averages from 1990 to 2000 (9.3 percent in Hawai'i compared to 13.2 percent nationally), Hawai'i's full-time population kept pace with the U.S. (4.2 percent compared to a national average of 4.1 percent) during 2000 to 2004. This placed Hawai'i 20th in the nation in percentage population growth during the time period.⁹ Natural population increases (births minus deaths) account for almost two-thirds of this increase (see Figure 2.1).¹⁰ The rest of the population increase was driven by international migration. Together, these offset a net loss of people moving out of Hawai'i into other U.S. states.¹¹



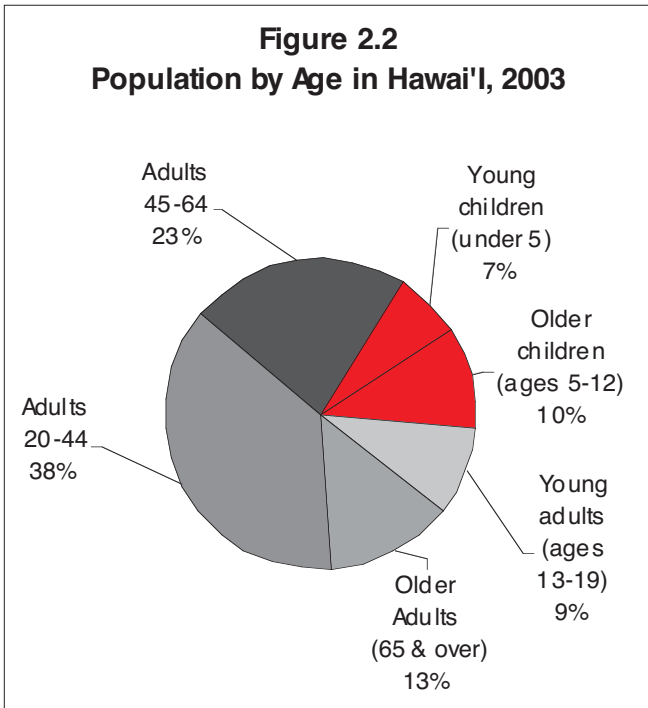
⁹ U.S. Census Bureau. *Census 1990, Census 2000, and Estimates of the Components of Population Change, United States and States, 2000 to 2004*. www.census.gov. Retrieved January 21, 2005.

¹⁰ U.S. Census Bureau. *Estimates of the Components of Population Change, United States and States, 2000 to 2003*.

¹¹ U.S. Census Bureau. *Estimates of the Components of Population Change, United States and States, 2000 to 2003*.

The population of children in Hawai'i is growing at a faster rate than the overall population. The number of children under five increased 8.5 percent from 2000 to 2003, significantly more than the general population's 3.7 percent growth.

Of the estimated 1.25 million people living full time in Hawai'i in 2003, more than 214,000—over 17 percent—are children ages birth through 12 (see Figure 2.2 and Table 2.1 for a break down by age group).¹² Children under 12 outnumber seniors 65 and older in the state. Additionally, there are also more than 48,000 children ages 13 through 15 who utilize some before- and after-school programs highlighted in the economic analyses of this report.



**Table 2.1
Population of Children by Age,
Hawai'i, 2003**

| Early Care and Education Age Group | Number of Children | Percent of Total Population |
|------------------------------------|--------------------|-----------------------------|
| 0 to 36 weeks | 11,914 | 1.0% |
| 37 to 52 weeks | 5,295 | 0.4% |
| 1 year | 16,925 | 1.4% |
| 2 years | 16,403 | 1.3% |
| 3 years | 16,315 | 1.3% |
| 4 years | 17,622 | 1.4% |
| Ages 5-10 years | 97,959 | 7.8% |
| Ages 11-12 years | 31,643 | 2.5% |
| Total | 214,076 | 17.1% |

Hawai'i's total population is expected to increase to 1.5 million by 2020, a 22.8 percent increase from 2000.¹³ The number of children under five is expected to grow at a slightly faster rate of 23.3 percent over the same time. Projections indicate that by 2020 there will be over 96,750 children under five, and over 229,500 children ages birth through 12.¹⁴

Early Care and Education Implications

Population trends indicate an increase in the population of children in Hawai'i, indicating a sustained need for early care and education programs.

Growth in the number of single-parent families increases need for early care and education if those parents need care while they work.

From 1990 to 2000, single-parent families, which often rely on early care and education for labor force participation, became more prevalent in Hawai'i. In 1990, 18 percent of all families with children under 18 had one parent in the home compared to 24 percent in 2000. If this trend continues there will be an increasing need for early care and education services to enable the employment of single parents.¹⁵

¹² Overall population estimate for 2003 is from U.S. Census Bureau. *Annual Population Estimates by State*, 2004, which revised the 2003 population estimate issued in 2003. Age distribution information are from U.S. Census Bureau. *Annual Population Estimates by State*, 2003. Revised population estimates by age were not available at the time of report preparation.

¹³ Hawai'i State Department of Business, Economic Development and Tourism, *Population and Economic Projections for the State of Hawai'i to 2030*, (Series DBEDT 2030), August 2004.

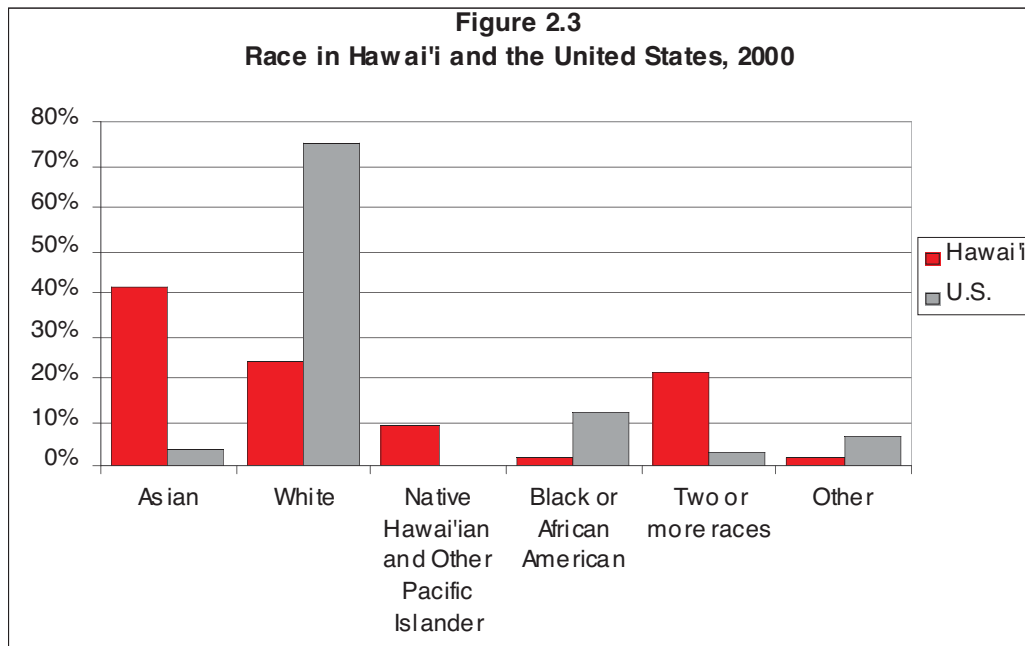
¹⁴ Ibid.

¹⁵ U.S. Census Bureau. *Census 1990 and Census 2000*.

The state of Hawaii is comprised of four counties and seven populated islands. The geographic isolation of many Neighbor Island communities results in few quality, affordable choices for working parents. Transportation to these programs and services can be an additional consideration. The demand for quality options in these communities far outstrips the supply.

DIVERSITY

Hawaii is unique among states in its diversity. Those of Asian descent make up 42 percent of Hawaii's population, Caucasians make up 24 percent. Those who define themselves as being of two or more races make up 21 percent of the population. Native Hawaiians and other Pacific Islanders make up over 9 percent of the population (see Figure 2.3).¹⁶ Within the Asian population in Hawaii, there is also considerable diversity, with 16.7 percent of the population of Japanese descent, 14.1 percent Filipino, and 4.7 percent Chinese. Additionally, 7.1 percent of Hawaii's population has Hispanic/Latino ethnicity (falling into both Caucasian and black/African-American races), compared to the national average of 12.5 percent.¹⁷ Hawaii's young children have higher proportions of Native Hawaiians (11.8 percent), those of two or more races (40.3 percent), and Hispanics/Latinos (12.2 percent), respectively.



Early Care and Education Implications

The diversity of Hawaii's children requires a varied array of culturally sensitive early care and education programs, including those with dual- or multi-lingual staff and with curricula that reflect parents' desires for their children's upbringing.

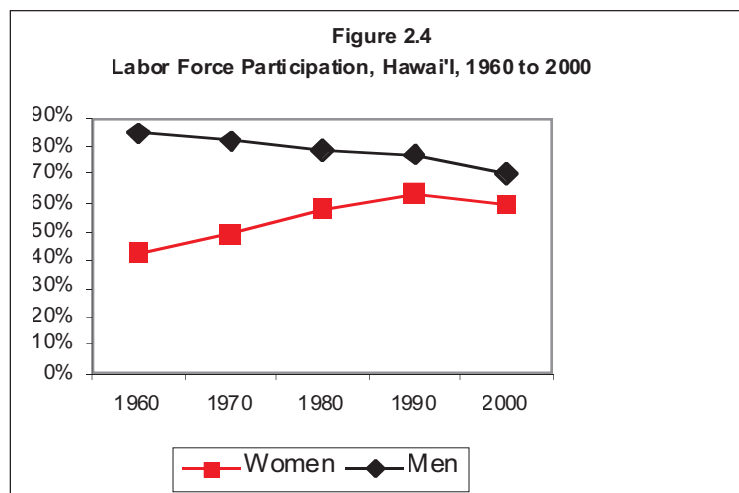
¹⁶ U.S. Census Bureau. *Hawaii's Population Projections: 1995 to 2025*. The following racial groups are all non-Hispanic/Latino: White/Caucasian, Black/African American, Asian, and "other."

¹⁷ U.S. Census Bureau. *Hawaii's Population Projections: 1995 to 2025*.

LABOR FORCE AND JOBS

WORKING PARENTS

Of the nearly 613,000 Hawai'i workers, one in four is a parent with a child under 18 living in a household where all parents work.¹⁸ Almost one in ten labor force participants has a child under age six.¹⁹ In Hawai'i, female labor force participation steadily increased from 1960 to 1990 but dropped from 63 percent in 1990 to 59 percent in 2000 (see Figure 2.4).²⁰ During the same time, male labor force participation dropped even further; from 77 percent to 70 percent, though it still remained far above the levels of females. Along with economic forces, a shortage of affordable, quality early care and education programs may have been a contributing factor in the declining labor force participation rates of females, since historically mothers are more likely to stay home to care for children than fathers. Increasing female labor force participation is an expressed goal of the Hawai'i Workforce Development Council.²¹ A high-quality, affordable ECE industry enables all parents' participation in Hawai'i's labor force, particularly for those who might otherwise stay home with children.



Even with declines in the female labor force participation, the majority of children live in households in which all parents work—62 percent of children under six and almost 71 percent of children ages six to eighteen (54,000 and 131,000 children, respectively).²²

Currently, there is space for approximately 30,000 children in 1,000 licensed facilities, and some of these are for part-day programs or only serve particular populations, such as military or Native Hawaiian pre-schools (see Appendix A for more detailed breakdown). Compare the 30,000 spots to 54,000 children under 6 and another 131,000 children between 6 and 18 years old who live in homes where all parents work.

Early Care and Education Implications

Labor force participation of parents is affected by early care and education opportunities. Without affordable, accessible early care and education, some young parents are unable to participate in the labor force.

Ensuring that young mothers have access to affordable early care and education will help Hawai'i's Workforce Development Council meet its goal to raise female labor force participation in Hawai'i.

Current formal early care and education capacity indicates that its use is limited, and that options need to be expanded for many parents.

What happens to children not in licensed programs? Many families use unlicensed options.²³ And not all families would use formal early care and education if it were available and affordable. Some prefer to arrange work schedules so that one parent can be home with the children at all times and others choose to place children with family, friends or neighbors (extended ohana care). These demographics highlight the need for increasing parents' options for early care and education, and the importance of ensuring that extended ohana care, while not part of the formal early care and education system, is recognized for the role it plays in many children's development.

¹⁸ U.S. Census Bureau, *Census 2000*.

¹⁹ U.S. Census Bureau, *Census 2000*.

²⁰ U.S. Census Bureau, *Census 1990 and 2000*.

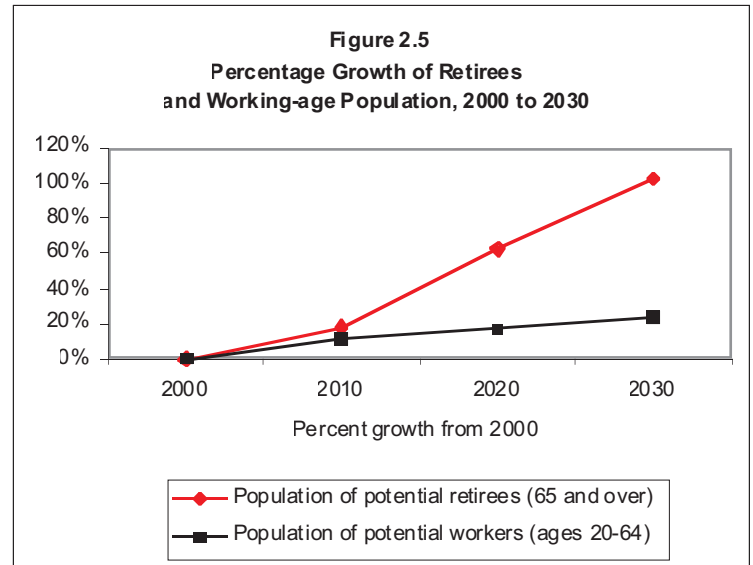
²¹ Hawai'i Workforce Development Council, *Report to the Governor: Workforce Development Strategic Plan*, 2001.

²² Percentages of children in working families are from U.S. Census Bureau, *Census 2000*. 2003 population estimates for Hawai'i were used to estimate numbers of children in working families. The 2003 American Community Survey finds a total of 87,027 children under 6 with all parents working, according to the 2005 *Child Care in the State of Hawai'i* brief created by the National Association of Child Care Resource and Referral Agencies (NACCRRA) and the Minnesota Child Care Resource and Referral Network, 2005.

²³ PATCH, Third quarter data 2003-2004.

RETIRING BABY BOOMERS

The aging of Hawai'i's population will have a significant impact on Hawai'i's economic potential in the next few decades. As the Hawai'i Workforce Development Council highlights, "The most significant demographic trend that workforce development will need to contend with over the next two to three decades is the aging of the baby boom generation."²⁴ The population of potential workers, those ages 20 to 64, is expected to grow approximately 23 percent from 2000 to 2030, a rate far below the growth of potential retirees, which are expected to more than double (102 percent; see Figure 2.5).²⁵ Even if baby boomers work past 65 years of age, which many will do, the proportion of the population that is of working age will drop significantly in the coming decades. Whether or not the economy can meet future economic challenges and the growing number of retirees will depend on the state's ability to continue supplying skilled workers and to support both children and elders.



Early Care and Education Implications

Hawai'i's labor force participation and/or productivity rates will have to increase to offset economic effects of "baby boomers" who may be retiring.

Increasing the supply of quality, affordable early care and education can help to meet parents' needs in workforce development initiatives and contribute to private sector and economic development efforts to expand and support Hawai'i's workforce.

HIGHER EDUCATION AND THE WORKFORCE

Between 1990 and 2000, the education levels of Hawai'i's population rose. In 1990, 23 percent of people 25 years or over had a bachelor's degree or higher and 80 percent were high school graduates.²⁶ In 2000, 26 percent of people over 25 years old had a bachelor's degree and 87 percent were high school graduates. Hawai'i ranks thirteenth in the nation in the percentage of adults with at least a bachelor's degree.²⁷

²⁴ Hawai'i Workforce Council. *Report to the Governor; Policy Brief: Hawai'i Workforce Initiatives for Economic Stimulus*, 2002.

²⁵ Hawai'i State Department of Business, Economic Development and Tourism, *Population and Economic Projections for the State of Hawai'i to 2030, (Series DBEDT 2030)*, August 2004.

²⁶ Hawai'i State Department of Business, Economic Development and Tourism. *Section 3: Education statistics*. Based on U.S. Census Bureau. Census 1990 and Census 2000. <http://www.hawaii.gov/dbedt/db00/sec03.html>. Retrieved October 11, 2004.

²⁷ E. J. Malecki and Hazel A. Marrow-Jones, OSU Center for Urban and Regional Analysis. "Hawai'i: Looking at the Future" (Based on a presentation titled "Hawai'i: A Profile," which was presented at a meeting of Governor Taft's Cabinet and staff, at Shawnee State Park, September 6, 2001. Sandra Livingston. "Brain Drain: Grads with Advanced Degrees are Flowing Out of Hawai'i," February 23, 2003, Cleveland Plain Dealer.

Despite these educational advances, a shortage of skilled workers is still acknowledged as a barrier for the development of the state's technology sector. As Hawai'i's Department of Business, Economic Development and Tourism notes, "Hawai'i's pool of skilled workers and managers with high-tech experience is small."²⁸ An employer survey for Hawai'i County found that 47 percent of employers replied that they were not "satisfied with overall skill of [job] applicants."²⁹ Another report stated that "there is a lack of skilled professional and technical workers. In our stakeholder interviews we found that it was difficult to recruit qualified workers."³⁰

Educational achievement advances aside, Hawai'i's undergraduates are not adequately prepared for higher education. The National Center for Public Policy and Higher Education writes "Despite improvement over the past decade, Hawai'i lags behind most other states in preparing students to succeed in college."³¹ Performance on national assessments by Hawai'i's eighth grade students lags behind the national average. For example, only 8 percent of low-income eighth graders score at or above "proficient," compared to a national average of 23 percent.³² This may contribute to the relatively low graduation rate. Consider this. While nearly 60 percent of high-school graduates in Hawai'i go on to be first-year undergraduates compared to a nation average of 57 percent, six years later, only 40 percent have Bachelor's degrees, compared to a national average of 51 percent. Preparing students for success in higher education will help students to finish more quickly and enter the workforce with their new education status.³³

Early Care and Education Implications

Targeted investments in the state's educational system, including early care and education, are needed to increase the supply of skilled and educated workers in the state and make Hawai'i's economy competitive in the future.

²⁸ Department of Business, Economic Development and Tourism, State of Hawai'i. *A New Millennium Growth Strategy for Hawai'i's Economy*, January 2000.

²⁹ Hawai'i Community College. "Hawai'i Community College Big Island Employer Survey," 1999.

³⁰ Chabin Concepts, Inc. *The Honolulu Benchmark Report: A Comparative Assessment of the City and County of Honolulu, Island of Oahu, in the U.S. Marketplace*, October 2001.

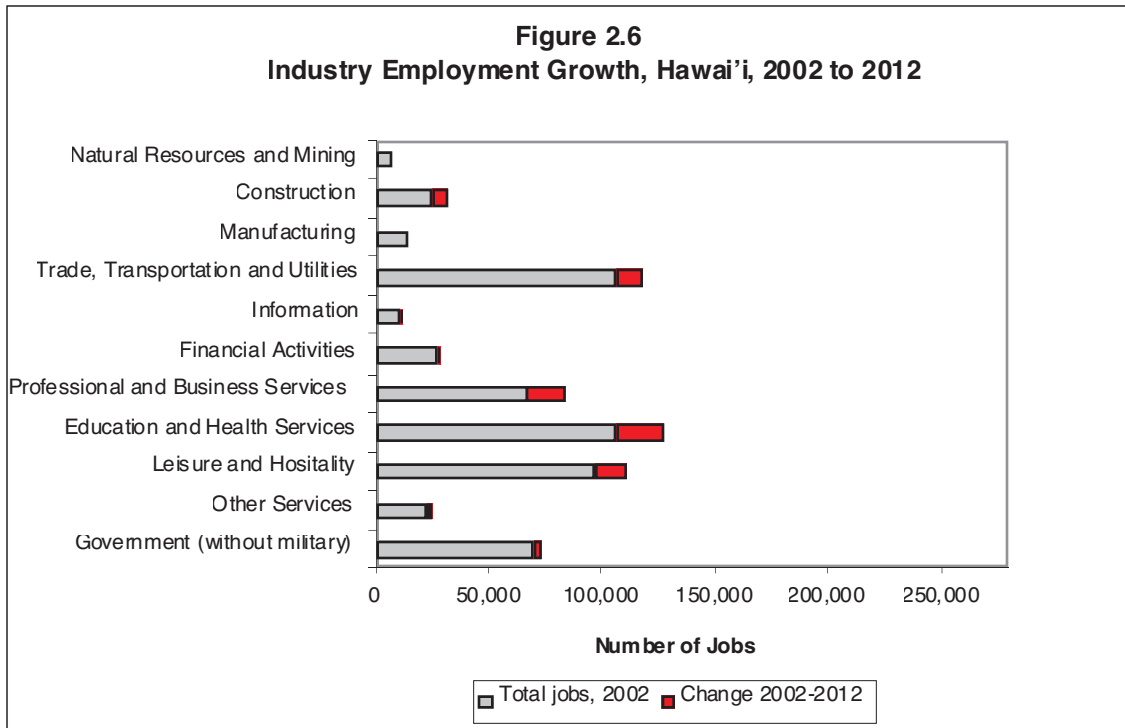
³¹ The National Center for Public Policy and Higher Education. *Measuring Up 2004: The State Report Card on Higher Education*. San Jose, CA: National Center for Public Policy and Higher Education, 2004, p. 5.

³² *Ibid.*

³³ D. Jones, National Center for Higher Education Management Systems. "Background Information: Workforce Development in Hawai'i." Presented to the Workforce Development Council, Honolulu, September 29, 2004.

EMPLOYMENT TRENDS

In addition to projecting overall growth in employment in Hawai'i, employment trends indicate that shifts will occur in the kind of work that the Hawai'i economy will demand. The service industry is expected to see the most growth, particularly in health and education services, professional and business services, and leisure and hospitality.³⁴ Several military projects are underway, which will likely bring more military personnel and their families to Hawai'i (military growth is not included in Figure 2.6). While there are early care and education facilities exclusively for military personnel, those who live off-base or prefer other care may use other providers in the state. This will further increase the need for early care and education in Hawai'i.



³⁴ Industry Employment and Growth Rates, State of Hawai'i, 2002-2012. Research and Statistics Office Department of Labor and Industrial Relations, State of Hawai'i. November 2004.

Specific occupational areas expecting the greatest number of job openings from 2002 to 2010 are sales, including retail sales clerks; building cleaning and maintenance people, including janitors and maids; food preparers and servers; health practitioners and technicians; and office and administrative workers.³⁵ The average annual wages of these ten occupations range from less than \$16,000 to more than \$58,000, though nine of the ten pay less than \$25,000 per year (see Table 2.2).³⁶

Table 2.2
2003 Average Annual Wages for Occupations with the Most Openings 2002-2012

| <i>Occupation</i> | <i>Average annual wage</i> |
|---|----------------------------|
| Waiters and Waitresses | \$22,030 |
| Retail Salespersons | \$21,070 |
| Cashiers | \$19,660 |
| Combined Food Preparers & Servers, including Fast Food | \$16,950 |
| Security Guards | \$21,290 |
| Janitors & Cleaners, except Maids & Housekeeping Cleaners | \$20,300 |
| Office Clerks, General | \$23,570 |
| Maids and Housekeeping Cleaners | \$23,690 |
| Registered Nurses | \$58,490 |
| Counter Attendants, Cafeteria, Food Concession, & Coffee Shop | \$15,690 |

Source: Hawaii Workforce Informer, based on the Occupational Employment Survey (OES).

Only one of these occupations pays enough for a parent with two young children to meet minimum costs for basic household expenses such as housing, child care, food, transportation, health care, clothing, and taxes anywhere in Hawai'i (see Table 2.3).³⁷ If parents take the jobs that pay these wages, they will not be able to meet basic household expenses.

Table 2.3
Basic Needs Budget for One Parent with a Pre-schooler and an Infant, 2003

| <i>Region</i> | <i>Family sustaining wage</i> |
|---|-------------------------------|
| Kamuela, Kailua-Kona, Waikoloa, Keauhou, Holualoa, Hawaii County | \$39,828 |
| Hawaii County, excluding communities listed above | \$36,491 |
| Honolulu County, East Honolulu, Waikiki, and urban Honolulu-Makai | \$44,321 |
| Honolulu County, Urban Honolulu - Mauka | \$38,497 |
| Honolulu County, Central and Windward | \$43,481 |
| Kauai | \$48,306 |
| City of Lahaina, Maui | \$52,874 |
| Maui County, excluding Lahaina | \$50,809 |

Source: D. Pearce and J. Brooks, *The Self-Sufficiency Standard for Hawaii*, April 2003.

³⁵ Occupations with the most Openings, State of Hawai'i, 2002-2012. Research and Statistics Office Department of Labor and Industrial Relations, State of Hawaii. October 21, 2004.

³⁶ Wages of State of Hawai'i's 20 Largest Occupations. May 2003 Annual Average. Research and Statistics Office Department of Labor and Industrial Relations, State of Hawaii. October 21, 2004.

³⁷ D. Pearce, Ph.D. *The Self-Sufficiency Standard for Hawai'i: Prepared for the Hawai'i State Commission on the Status of Women*, April 2003.

For those working in lower-wage occupations, economic supports are needed to enable the labor force participation and to help families meet basic needs. In addition, many service industry jobs demand work during hours outside the traditional workday, and parents in these occupations will need early care and education during non-traditional hours to enable their labor force participation. Almost 8 percent of Hawai'i's workforce holds more than one job, ranking Hawai'i 11th in the nation for percentage of multiple job holders. These workers need additional early care and education options to meet their rigorous working schedule.³⁸

While most of the large-growth occupations do not pay high wages or require extensive training or education, many of the fastest growing occupations and those targeted for growth by economic development leaders do.³⁹ Educational opportunities can develop a skilled future workforce and re-train working adults for new employment areas requiring higher skill levels. A higher-skilled workforce will also likely have the effect of stimulating job growth in higher wage occupations, an economic development goal of many states, including Hawai'i. Early care and education plays a pivotal role in supporting the education and retraining of the workforce.

Early Care and Education Implications

Projected increases in high-skilled jobs and the desire to stimulate growth in high-wage jobs increase the need for quality early care and education programs to enable parents to seek education and training and to prepare the future workforce for high-skilled employment.

Increased employment demand in lower-wage service and retail areas highlights the necessity for affordable, quality early care and education programs that are available outside the traditional workday.

FAMILY ECONOMICS

EARLY CARE AND EDUCATION AND THE FAMILY BUDGET

Inflation in Hawai'i is outpacing the rest of the United States, and the rise in the cost of living is putting a squeeze on many families' finances.⁴⁰ As Paul Brewbaker, Senior Vice President at the Bank of Hawaii said, "People with a skill set in high demand are likely to stay ahead of inflation....For others, especially for those without strongly marketable skills, inflation is likely to eat away at their earnings."⁴¹ According to a cost of living survey, Honolulu leads the nation's cities in costs for standard grocery items (52 percent higher than national averages) and gasoline (32 percent higher than national averages). Hawai'i's housing prices are more than twice the national average.⁴²

With these basic household expenses already overburdening Hawai'i's families, early care and education costs are an issue for families in most income brackets. The average annual cost for licensed care and education is \$2,400 per year for before- and after-school programs for school-age children. The average annual cost for an infant is \$8,105 for an early care and education center-based program (see Appendix A for a complete breakdown).⁴³ (This does not include in-kind contributions, such as reduced or

Average pre-school costs for a three-year-old were \$5,620 in 2004—the same as undergraduate tuition for Hawai'i residents at the University of Hawai'i (\$5,616 per year).

³⁸ J. Campbell. Multiple job-holding in States, 2003. Bureau of Labor Statistics. <http://www.bls.gov/opub/mlr/2004/07/rgtrends2.pdf> Retrieved October 12, 2004.

³⁹ Top 20 Fastest Growing Occupations, State of Hawaii, 2002-2012. Hawai'i Workforce Informer. November 2004.

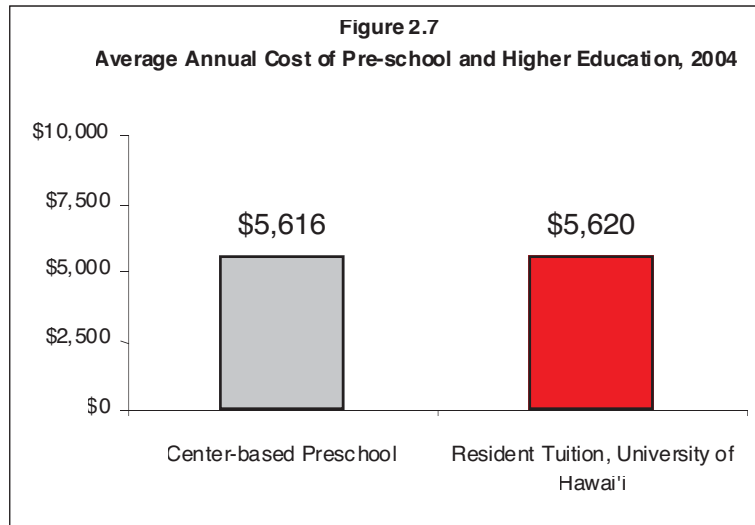
⁴⁰ Star Bulletin. "Housing and Fuel Costs Drive Hawaii Inflation. Retrieved September 10, 2004. <http://starbulletin.com/2004/08/18/news/story6.html>.

⁴¹ As cited in Star Bulletin. "Housing and Fuel Costs Drive Hawaii Inflation. Retrieved September 10, 2004. <http://starbulletin.com/2004/08/18/news/story6.html>.

⁴² University of Hawai'i Economic Research Organization. "Honolulu 4th Most Expensive U.S. City." <http://www.uhero.hawaii.edu/accra/costofliving2003q3.html>. December, 2003. Retrieved on September 10, 2004.

⁴³ Based on market rate information from PATCH, Hawai'i's child care resource and referral agency, 2004.

free rent, or reduced costs as a result of low provider wages.) The average cost for a three-year-old in pre-school in 2004 (\$5,620 per year) is almost the same as full-time undergraduate tuition for a Hawai'i resident at the University of Hawai'i at Manoa (\$5,616 for the 2004-05 academic year; see Figure 2.7).⁴⁴



The problem is that early care and education is a significant expense for young families at a time when they are likely to have fewer resources.⁴⁵ Full-time, center-based care for an infant takes up 12 percent of the state's estimated median income for a family of four in 2004 (\$66,014).⁴⁶ This same family with a preschooler and an infant would spend more than 20 percent of their income for full-time center-based care for their children.⁴⁷ For a single parent working as a food prep worker earning less than \$17,000 per year, full-time center-based early care and education for an infant is almost half that income if no assistance is provided.⁴⁸

Hawai'i's child care assistance program helps income-eligible working families purchase early care and education. Parents pay a portion of the costs based on a sliding fee scale. It is estimated that only 1 in 11 eligible Hawai'i children receive child care assistance funded through the Child Care and Development Block Grant (CCDBG), which is the principal source of federal funds for child care assistance.⁴⁹ (There are a variety of other programs for low-income families in Hawai'i, which will be discussed more fully in the next section.) Families who are just above eligibility thresholds have particularly high cost burdens.

⁴⁴ Early care and education costs are from: PATCH (Hawai'i's Child Care Resource and Referral Agency). *Paying for Child Care*. Child Care costs are based on their estimate of care costing an average of 400 per month or \$4,800 per year. This information can be found on: <http://www.patchhawaii.org/Families/payingForCare.asp>. Tuition at the University of Hawai'i is from: University of Hawai'i. *Tuition Schedule, 2004-2005*. These costs do not include room and board costs, but do include two full-time semesters and two summer sessions of eight credits each. Other University of Hawai'i tuition information can be found at: <http://www.Hawaii.edu/academics/tuition.html>

⁴⁵ G. Becker and N. Tomes. "Human Capital and the Rise and Fall of Families." *Journal of Labor Economics*, Vol. 4(3):S1-S39, 1986.

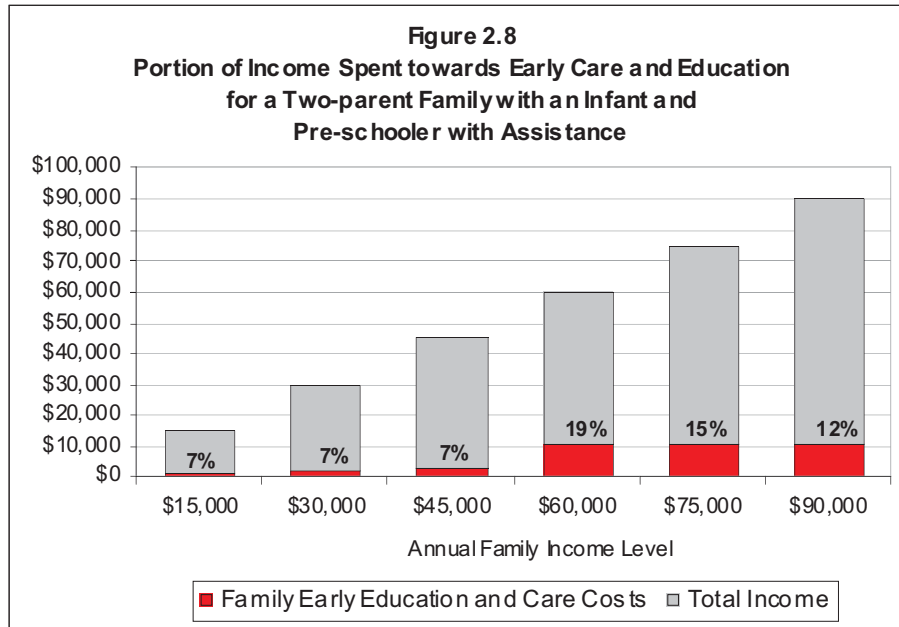
⁴⁶ Early care and education costs are taken from the state's child care market rate survey, Department of Human Services. Estimated 2004 median income for a family of four is from the Department of Health and Human Services Administration for Children and Families. "State Median Income Estimate for a Four-Person Family (FFY 2004); Notice of the Federal Fiscal Year (FFY) 2004 State Median Income Estimates for Use Under the Low Income Home Energy Assistance Program (LIHEAP) Administered by the Administration for Children and Families, Office of Community Services, Division of Energy Assistance. Volume 68, Number 72, April 15, 2003, pages 18230-18232.

⁴⁷ *Ibid.*

⁴⁸ State of Hawai'i Department of Industrial Relations, Research and Statistics Office. *Occupational Employment and Wages in Hawai'i, 2001*. Average annual wage was calculated by assuming that the single parent worked 40 hours per week, 52 weeks per year, for the 2001 average hourly rate for a retail salesperson (\$8.50).

⁴⁹ Fight Crime Invest in Kids. *Preventing Crime with Pre-kindergarten: A Critical Investment in Hawai'i's Safety, 2004*. This estimate is based on 1999 data. Many eligible families, particularly in rural areas, may refuse or not need child care assistance.

Compare two-parent families with one infant and one pre-schooler at various income levels. While families who are eligible for subsidies pay approximately 7 percent of their total income in early care and education fees (required parent co-payments and extra costs above the government reimbursement rate), families just above the threshold who are not eligible for assistance must pay almost 20 percent of their income for these same programs (see Figure 2.8).



Early Care and Education Implications

The cost of early care and education takes up significant portions of many families' budgets. The availability of affordable early care and education affects families across all income brackets. But with stable, affordable early care and education parents can pursue and maintain employment opportunities and increase the economic vitality of their young families.

SECTION THREE:

Economic Profile OF THE ECE Industry

To assess the economic characteristics of the ECE industry in Hawai'i, this section quantifies:

- The size of the industry, as reflected in output or gross receipts
- The total direct employment of the industry
- The capture of federal and state monies designated for early care and education
- The size and characteristics of the early care and education market

It should be emphasized, though, that this economic analysis only covers the formal industry outside of K-12 education, which includes licensed child care centers, licensed family child care homes, license-exempt family child care homes that receive government funds, Head Start, Early Head Start, Pūnana Leo preschools, After-School Plus (A+) Programs, centers and family child care homes that serve children of parents in the military, and Kamehameha preschools. This analysis does not cover the informal ECE industry.

SIZE OF THE ECE INDUSTRY

MEASURING INDUSTRY OUTPUT OR GROSS RECEIPTS

Output, also known as gross receipts, measures the size of an industry in terms of the overall value of the goods and services produced by that industry over the course of a given year. For the ECE industry, gross receipts are equal to the total amount of dollars flowing into the sector in the form of payments for care. These include private funds, such as parent fees, grants, or scholarship programs, and county, state, and federal funds.

State and national surveys do include “child day care services” as an industry classification, but do not include the full range of types of care.⁵⁰ That’s because the establishments are so diverse. They include self-employed individuals, programs run by religious or social organizations, and not-for-profit and for-profit small businesses and chains. The diversity causes an underestimate in economic indicators such as gross receipts and employment by state and national economic and business survey methodologies. This study uses a more accurate method of measuring the size of the industry because it relies primarily on data from state agencies charged with administering part of the complex system that makes up the formal ECE industry (please see Appendix A for a detailed methodology).

Using the more comprehensive methodology, the total gross receipts of the ECE industry in Hawai'i is \$240.9 million.

In total, the early care and education industry in Hawai'i generated \$240.9 million in gross receipts in fiscal year 2004.

⁵⁰Two widely used industry categorization systems are the North American Industry Classification System (NAICS) and the Standard Industry Classification (SIC) system. “Child Day Care Services” corresponds to NAICS code 624410 and SIC code 8351.

These gross receipts are primarily from parents' payments for early care and education, but they also include government contributions that make early care and education programs affordable for low-income families (see Table 3.1).⁵¹

| <i>Type of Program</i> | <i>Gross receipts, FY2004, in millions</i> |
|--|--|
| Licensed child care centers | \$159.1 |
| Civilian private | \$91.3 |
| Military | \$30.1 |
| Head Start | \$23.8 |
| Kamehameha preschools | \$13.9 |
| License-exempt providers (DHS subsidized only) | \$20.4 |
| Special Education preschools | \$24.0 |
| Licensed family child care homes | \$18.5 |
| Civilian private | \$10.7 |
| Military | \$7.8 |
| A+ Afterschool | \$18.9 |
| Total | \$240.9 |

The gross receipts value includes scholarships or other tuition benefits from employers to parents, since they would make up a portion of parents' payments. It also includes philanthropic dollars from foundations, religious institutions, or local governments or agencies.

What this analysis does not include is any employer monies or philanthropic dollars invested in a program outside of the cost to parents. For example, a grant to offset rent or mortgage costs may enable a center to offer cheaper tuition. But only the revenue from the tuition is included in the gross receipts value. So this analysis underestimates the total dollars going into the industry.

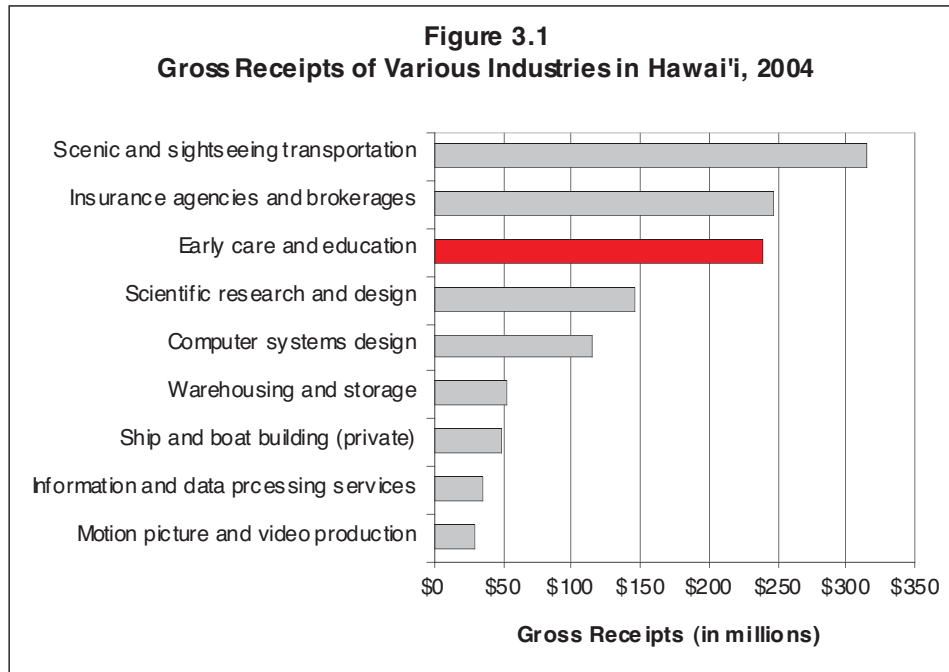
The U.S. Census Bureau's 1997 Economic Census reports gross receipts, adjusted to 2004, for "child day care services" totaling \$53.13 million in Hawai'i.⁵² This value is just one-quarter of the comprehensive value calculated in this report. Some of the discrepancy is likely due to the time difference between surveys while some is due to the Census Bureau's less comprehensive industry classification.

⁵¹ Eligibility for child care assistance and government programs like Head Start vary.

⁵² U.S. Census Bureau. 1997 Economic Census. The Census is mailed to a list based on U.S. businesses with employer identification numbers (EIN), and excludes private households and governments. The 1997 Economic Census is the most recent for which data is available, and although the value has been adjusted to 2004, it may not reflect industry changes over the past seven years.

GROSS RECEIPTS COMPARED WITH OTHER INDUSTRIES

Comparing the ECE industry's gross receipts with other industries in the state provides a picture of the relative effect that the ECE industry has on the economy. The most recent Economic Census of Hawai'i's businesses is not available, but adjustments to the 1997 Census give some picture of the relative size of industries in the state. The statewide annual revenue for industries, adjusted to 2004, ranges widely in size, from \$573,000 for specialty book stores to more than \$2.0 billion for motor vehicle and parts dealers.⁵³ Comparing the gross receipts value of the ECE industry with similarly sized industries gives some context to the ECE industry's gross receipts values. Early care and education generates more gross receipts than scientific research and design (\$146.6 million), computer systems design (\$115.6 million), and motion picture and video production (\$37 million; see Figure 3.1).⁵⁴



Gross receipts values for all industries except early care and education are based on the 1997 Census, adjusted to 2004 using the Consumer Price Index (CPI).

Comparing gross receipts however, does not show the true economic benefits of any particular industry. One must take into consideration its purchases from other industries in Hawai'i. For example, motor vehicles may be sold in Hawai'i and therefore generate large amounts of revenue, but many of the products and services used to produce the cars are purchased in the states where the cars are manufactured. Industries with businesses located in Hawai'i paying workers who live in Hawai'i and purchasing from other Hawai'i-based businesses have additional economic benefits that go beyond their gross receipts. The linkages between industries is discussed later in this section and in Appendix B.

The gross receipts of early care and education are larger than motion picture and video production, information and data processing, and scientific research and design combined.

⁵³ Based on the U. S. Census Bureau's 1997 Economic Census, and adjusted to 2004 values using the CPI.

⁵⁴ Based on the U. S. Census Bureau's 1997 Economic Census, and adjusted to 2004 values using the CPI.

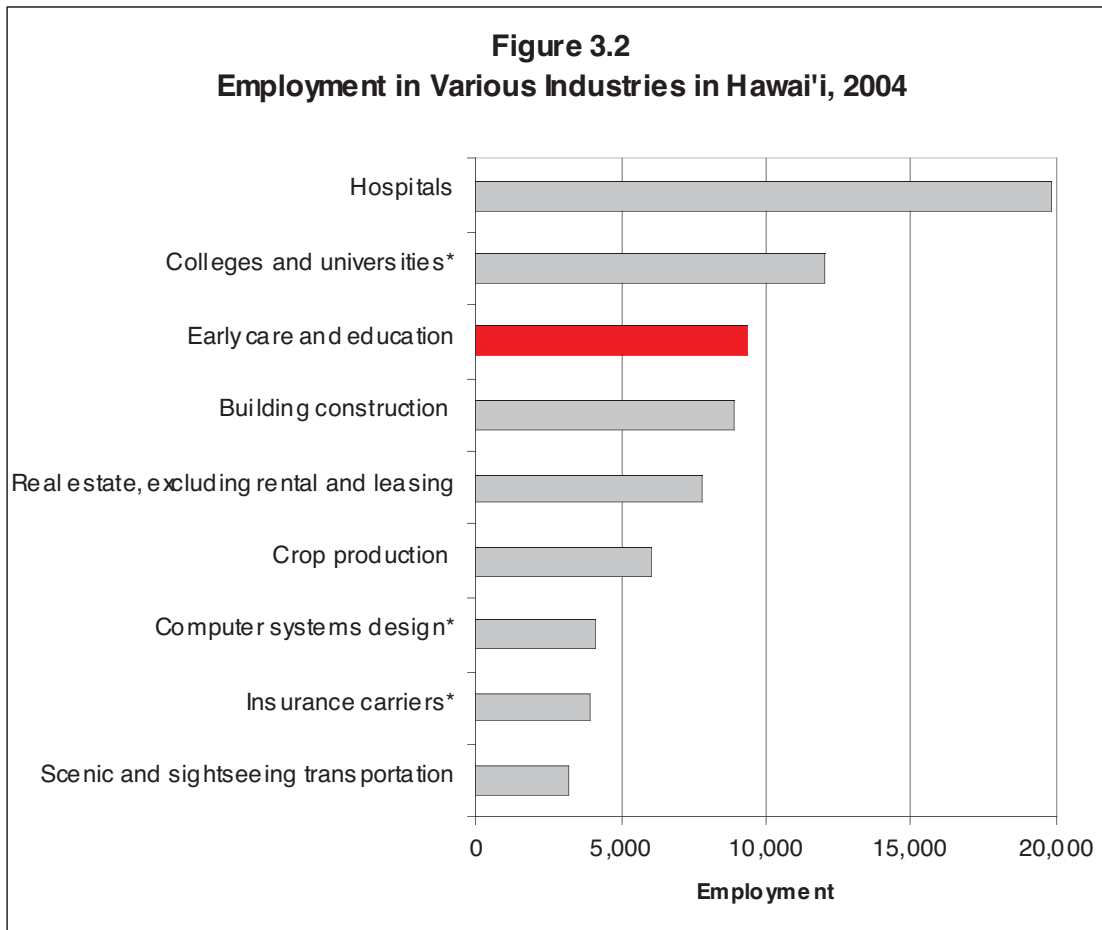
INDUSTRY EMPLOYMENT

Direct employment for early care and education in 2004 in Hawai'i is estimated to be 9,375 employees. This figure is derived from the number of children in different types of programs and average staffing reported through surveys or minimum staffing required by law for different age groups (please see Appendix A for a detailed methodology). This does not include relatives or workers in private, license-exempt centers or homes who care for children with public subsidies. Although they spend significant amounts of time educating and nurturing young children, the reimbursements that relatives receive are not intended as wages or income. Therefore the estimate understates the total early care and education economic activity from employment.

DIRECT EMPLOYMENT COMPARED WITH OTHER INDUSTRIES

To put employment findings in context, the number of employees in early care and education is compared to employment in other industries. The number of early care and education employees is similar to the number in all building construction in the state (8,751). The number of employees in the ECE industry exceeds that in real estate (excluding rental and leasing, 7,908 employees), crop production (6,061) and computer systems design (4,095; see Figure 3.2).⁵⁵

The formal early care and education industry is similar in size to the building construction industry, and more than real estate (excluding rental and leasing) and all crop production.



Employment values for all industries except early care and education and those marked with an asterisk are from the ES-202 survey for the first half of 2004, which includes all employees covered under Unemployment Insurance (UI), and excludes self-employed individuals and those not covered under UI. Employment for those marked with an asterisk are ES-202 2003 annual employment values because 2004 numbers were not available.

⁵⁵ Data is from the 2003 Hawai'i Covered Employment and Wages (ES-202) survey.

LINKAGES TO OTHER INDUSTRIES

Early care and education is linked to the rest of the local economy through a number of avenues. Providers purchase supplies and services from other businesses. Businesses that spend more money in Hawai'i-based businesses rather than on imported goods or services will have stronger economic benefits for the state. These linkages can be measured using an input-output model and its associated multipliers, a methodology used by some economic development specialists. A description of these linkages is included in Appendix B.

Using Type I multipliers provided by the IMPLAN model, \$240.9 million in gross receipts corresponds to \$70 million in indirect effects for a total economic effect of \$310.9 million. Employment of 9,375 corresponds to an additional 1,260 jobs supported in other industries for a total employment of more than 10,500.

SOURCES OF FUNDING FOR EARLY CARE AND EDUCATION

The majority of early care and education costs are covered by parents, although other sources, both public and private, play an important role in the industry. Some of these contributions go directly towards tuition, while others strengthen the infrastructure and/or help to keep tuition costs down. The availability of these funds for early care and education plays an important role in supporting local economic development, sustained employment of low-income families, and development of Hawai'i's children for school readiness and future economic success.

- **The Hawai'i Department of Human Services (DHS)** assists income-eligible parents who are maintaining employment or attending education/training classes. Families may choose their own licensed or license-exempt provider. Low-income families with gross monthly income at or below 85 percent of the 2001 state median income (\$52,560 for a family of four) are eligible for early care and education assistance.⁵⁶ Spending totaled \$31.5 million in 2003 and \$41.2 million in 2004.⁵⁷ DHS also supports the Hawai'i Preschool Open Doors Project which enables parents of three- and four-year-olds living at or below 75 percent of the state median income to use certificates to purchase full day early care and education programs at licensed centers. DHS funding for this project was \$3.8 million in 2004.⁵⁸ In addition DHS contributed \$1.3 million in wrap-around care for children enrolled in Head Start and \$6.0 million for the After-school Plus (A+) program in 2004.⁵⁹ DHS also supports parenting and children's activities, including early care and education provider training, resource and referral assistance, nutrition services, inclusion programs, and early care and education program licensing for a total of \$5.0 million.⁶⁰

⁵⁶ Hawai'i Department of Human Services. *Hawai'i Administrative Rules, Title 17, Chapter 798.1, Child Care Services*. For more detailed information on eligibility, please refer to this guidebook which can be found on: <http://www.state.hi.us/dhs/17-798-1.pdf>. Estimated median income from the Federal Register: April 15, 2003 (Volume 68, Number 72).

⁵⁷ Financial information was collected by the Good Beginnings Alliance, 2004.

⁵⁸ Ibid.

⁵⁹ Hawaii Department of Education. Reports to Legislature, 2004 Ref. Act 200, H.B. 200, H.D. 1, S.D.1, C.D. 1, Part VII, Section 142.

⁶⁰ Private Communication with Garry Kemp, Hawai'i Department of Human Services, November 17, 2004.

- **The Hawai'i Department of Education (HDOE)** funds two programs that are a part of early care and education. The first is special education for children ages three through five with special needs. In SFY 2003, this program received more than \$25.4 million from HDOE.⁶¹ The second program is the After-School Plus (A+) Program, which brings affordable after-school services to children in public elementary schools whose parents work, attend school or are in job training programs. Parents of children in the program pay a monthly fee but the program is also subsidized by HDOE.⁶² In SFY 2004, HDOE's allocation for the A+ program was \$2.5 million, which was combined with funds from DHS for total public funding totaling \$8.5 million for 2004.⁶³
- **The University of Hawai'i** supports the early care and education needs of students and faculty by providing child care centers on the following campuses: Manoa, Honolulu, Kapiolani, Leeward, Kauai, and Hawai'i Community Colleges. Fees are based on a sliding scale determined by income and family size, and eligible ages vary by program. The University financially covers the gap between the parent fees and the true cost of care and education. In 2003, the University spent \$1.7 million in these on-campus centers.⁶⁴
- **The United States Department of Agriculture Child Care Food Program** contributes dollars to the local economy, amounting to \$4.4 million for Hawai'i in 2004.⁶⁵ These federal funds enable providers to supply nutritious meals for low-income children attending their early care and education programs.
- **The United States Head Start/Early Head Start** child development programs represent another significant area of public funding. Head Start/Early Head Start serves children from birth to age five and pregnant women and their families in child-focused programs designed to increase school readiness of young children in low-income families.⁶⁶ In FY 2003, Hawai'i received more than \$19.4 million for Head Start and \$4.4 million in federal funds for Early Head Start.⁶⁷ As mentioned above, DHS contributed \$1.3 million in wrap-around care for children enrolled in Head Start in 2004.
- **The United States Department of Defense** has a model child development program for children of parents in the military. The programs are subsidized and parents pay on a sliding scale based on their income. While it was not possible to get exact expenditures for this report, using estimates of the number of military children in early care and education and the full cost of military programs, and subtracting estimates of parents' copayments, the Department of Defense spent roughly \$21 million in 2004 to provide quality services for children of military parents in Hawai'i.⁶⁸
- **ALU LIKE, Inc.'s Native Hawaiian Child Care Assistance Project**, with funds from the Native Hawaiian Education Act, provides subsidies for Native Hawaiian and part-Native Hawaiian children of parents who work or go to school and helps to ensure quality early care and education. Parents must meet the same employment/training and income eligibility requirements as the DHS child care assistance program. In SFY 2003, the project paid over \$650,000 for early care and education services for Native Hawaiian families of low-income.⁶⁹ ALU LIKE also spent \$40,000 in 2003 improving quality of early care and education programs, providing educational materials and teacher training.

⁶¹ This financial information was collected by the Good Beginnings Alliance in September 2004.

⁶² Hawai'i Department of Education. *After School Plus Program (A+)*. As found on: <http://doe.k12.hi.us/programs/aplus.htm>

⁶³ Hawai'i Department of Education. Biennial Operating Budget 2003-05. Available at <http://doe.k12.hi.us/reports/BiOpbudgetapproved0305.PDF>. The A+ program also received \$3.5 million in impact aid in 2004.

⁶⁴ Ibid.

⁶⁵ United State Department of Agriculture. Child and Adult Care Food Program: Cash Payments. Data as of January 26, 2005. Available at <http://www.fns.usda.gov/pd/cccash.htm>. Retrieved February 24, 2005. It is not clear whether this amount includes children in military families who are eligible for U.S.D.A.-subsidized meals.

⁶⁶ US Department of Health and Human Services, Administration for Children, Youth and Families; Head Start website at <http://www2.acf.dhhs.gov/programs/hsb/about/index.htm>.

⁶⁷ Financial information was collected by the Good Beginnings Alliance, 2004.

⁶⁸ Cost of care was derived from a report by G. L. Zellman and S. M. Gates. *Examining the Cost of Military Child Care*. Santa Monica, CA: RAND Corporation, 2002.

⁶⁹ Financial information was collected by the Good Beginnings Alliance, 2004.

- **Pūnana Leo Preschools** are family-based educational centers where families are active in the learning process. An immediate family member must commit to attending ongoing Hawaiian language classes in order to make Hawaiian the living language of the home. Family members must commit to eight hours of in-kind service per month as well as monthly parent meetings. With funds established through the Native Hawaiian Education Act, these preschools had supports of \$2.4 million in SFY 2003.⁷⁰
- **Kamehameha Schools** offers preschools and provides tuition assistance through the Pauahi Keiki Scholarship Program to families whose children attend certain nationally accredited preschools. Children three- and four- years old who are of Hawaiian ancestry and who demonstrate financial need receive preference for scholarships. In 2003, this program spent \$13.9 million.⁷¹
- **Maui County** allocated and spent county funds towards early care and education in the county, totaling \$150,000 in FY 2004.
- **Philanthropic organizations** support the ECE industry. A survey of centers found that tuition grants from private foundations totaled \$1.8 million in 2003.⁷²

THE MARKET

Currently, the ECE industry, including licensed early care and education centers, Head Start facilities, family child care homes, after-school programs, and pre-schools, has the capacity to serve more than 65,000 children at any one time.⁷³ Overall, there are an estimated 216,000 children ages birth to twelve in the state, meaning that only 30 percent can be served at any one time by formal early care and education programs.

The percentage of children served varies considerably by age. Infants and toddlers are significantly more underserved than pre-schoolers, who are able to attend public pre-schools as well as private centers and family child care homes (see Table 3.2). The number of school-age children who are served by formal programs is low, although there are a variety of license-exempt, unregulated programs available to school-age children, such as parks and recreation programs, that are not captured in this analysis.

Table 3.2
Children Ages Birth to 12 Served by the Formal ECE industry, 2003

| <i>Age of children</i> | <i>Number in population</i> | <i>Current full-time enrollment*</i> | <i>Percent of population served</i> |
|--|-----------------------------|--------------------------------------|-------------------------------------|
| Infants and Toddlers (Birth to 2 years) | 34,134 | 6,279 | 18% |
| Pre-schoolers (3 to 5 years) | 50,340 | 27,936 | 55% |
| School-Age Children (5 to 12 years) | 129,603 | 30,837 | 24% |

*This value may underestimate the total number of children using early care and education, because one full-time enrolled slot could serve more than one child if each child goes part time.

⁷⁰ Financial information was collected by the Good Beginnings Alliance, 2004.

⁷¹ Financial information was collected by the Good Beginnings Alliance, 2004.

⁷² Financial information was collected by the Good Beginnings Alliance, 2004.

⁷³ Data for all licensed programs as of December 2003 provided by PATCH, the Hawai'i Department of Education, Good Beginnings Alliance, and the Department of Human Services, July 2004.

DEMAND

Demand for the industry relies on key factors: need, quality, affordability, accessibility, and preference. These factors are interrelated, making it difficult to quantify market demand from an economic standpoint. Given the high labor force participation rates of parents and the need for training opportunities throughout the lifespan for workers to thrive in the current labor market, it is clear that the need for some form of early care and education to enable parents to work or get training outside the home is strong...and growing stronger.

The desire for quality is growing as parents and policymakers understand the importance of quality early education opportunities for young children and learn how to identify quality programs. Industry and economic development leaders also recognize that early education opportunities are the foundation of a high-quality education system in Hawai'i (see Section Four). Despite this interest in higher quality programs, the ECE industry will experience limited increase in market demand from parent-consumers, because parents are already struggling or unable to pay for early care and education programs. Parents will demand quality programs if their portion of the costs are affordable. High operating costs and, in some cases, inadequate business skills training of facility directors, leaves early care and education programs with tight operating margins. The vast majority cannot pay for increased quality out of existing budgets. For example, of the roughly 450 early care and education centers in Hawai'i, 71 meet the quality standards and are accredited by the National Association for the Education of Young Children. Accreditation requires additional teaching staff than state legal staff-to-child ratios require and lower group sizes than the state mandates.⁷⁴ Of these 71 programs, only 26 are fee-based, open programs, while the rest have significant non-parent funding (e.g., military preschools and Kamehameha preschools) and have higher operating margins than typical facilities.

Accessibility and affordability remain critical barriers for many families who need or would prefer quality formal early care and education. Accessibility—location, hours of operation, and transitions between part-day programs—affect parents' ability to use programs. Availability is affected by geographic variation as well as the high start-up costs for facilities. Rural and urban areas differ in the best service delivery system, since transportation and commuting patterns as well as parental preferences differ. Demographic and economic trends indicate that more families will be challenged by these issues as the low-wage workforce, many of whom work non-traditional hours or in multiple jobs, expands. Because the ECE industry is not well integrated into economic development planning, availability is not evenly distributed across the state's communities or located in areas that families can easily use.

Parental preference for formal early care and education programs is an important factor in demand for the ECE industry. Ensuring that the other key elements driving demand are not barriers for parents gives them the full range of options for their children's upbringing.

ECE INDUSTRY WORKFORCE

The average annual wage of a early care and education professional in Hawai'i is \$18,015.⁷⁵ A survey of centers revealed that 17 percent of early care and education teachers receive no paid vacation at all, and while all teachers receive health insurance, 88 percent do not have health insurance that extends to dependents.⁷⁶ One benefit currently offered many early care and education workers is reduced-price or free early care and education for their own children.⁷⁷

The average annual wage of an early care and education professional in Hawai'i is just over \$18,000. One-quarter of center-based teachers leave every year.

⁷⁴ National Association for the Education of Young Children. *NAEYC Accredited Program Search, Hawai'i*, May 2004.

⁷⁵ Department of Labor and Industrial Relations. *2003 Employment and Payrolls in Hawaii: A Report on Covered Employment and Wages*. Honolulu: State of Hawaii. October 2004.

⁷⁶ Good Beginnings Alliance. *Who Cares for Hawaii's Keiki in Centers? The Hawai'i Early Childhood Workforce Study*. Honolulu: Good Beginnings Alliance, 2004.

⁷⁷ Private communication. Buffy Owens, Chief Operating Officer, Kama'aina Kids. 2004.

A survey of centers found that one-quarter of teachers left their positions in one year.⁷⁸ Turnover of teaching staff hurts program quality. It increases recruitment costs and lowers experience levels. Perhaps even more important, it weakens the relationship between caregivers and children, which is an important component of quality programs. The stability of a child's relationship with his or her provider is important to a child's social and emotional relationships and cognitive development.⁷⁹ Lack of stability may lead to increased aggression and possibly affect cognitive and social development.⁸⁰ There are a number of efforts underway to improve educational attainment, wages, benefits, and the retention rate of the early care and education workforce. Expanding these efforts will strengthen the ECE industry workforce and help the industry meet barriers to increasing quality.

IMPLICATIONS

The ECE industry supports the economy by allowing parents to work and preparing children for future academic success. And, the ECE industry contributes to the economy's vitality by employing significant numbers of workers, generating substantial gross receipts, and purchasing goods and services from many other industry sectors. The industry also supports local economies by garnering significant levels of county, state, and federal funds available to provide early care and education to low-income families. These families represent a substantial portion of the existing and potential workforce, and are vital to the continued growth of the economy.

⁷⁸ Good Beginnings Alliance. *Who Cares for Hawaii's Keiki in Centers? The Hawai'i Early Childhood Workforce Study*. Honolulu: Good Beginnings Alliance, 2004. The year questioned in the survey was 1999-2000.

⁷⁹ S. Barnett, "Solving the Real Preschool Teacher Crisis." C. Todd and D. Deery-Schmitt. "Factors Affecting Turnover Among Family Child Care Providers: A Longitudinal Study." *Early Childhood Research Quarterly*, vol. 11, p. 351-376, 1996.

⁸⁰ S. Barnett, "Solving the Real Preschool Teacher Crisis."

SECTION FOUR:

Early Care and Education, Business, AND Economic Development

In addition to being a significant job-creating, income-generating industry in its own right, there are four key ways in which the ECE industry benefits Hawai'i businesses and the state's economy as a whole. It:

- Supports the current labor force in Hawai'i by facilitating parents' labor force participation, enabling parents' career development and educational advancement, and attracting young working families and businesses to the state and helping retain them
- Drives labor force productivity by decreasing absenteeism, reducing turnover, and enhancing recruitment at existing businesses
- Cultivates Hawai'i's future workforce by improving the cognitive skills and emotional well-being of children and ensuring that they enter the K-12 school system ready to continue learning
- Offers a financial return by reducing future public spending in such areas as criminal justice, remedial education, unemployment, and welfare

SUPPORTING THE CURRENT LABOR FORCE

A strong ECE industry:

- Sustains labor force participation rates of parents
- Enables career development and educational advancement
- Attracts young working families and businesses to the state and helps retain them

SUSTAINING LABOR FORCE PARTICIPATION

There are nearly 103,000 Hawai'i families with children under 18 in which all parents work. These families earn over \$5.1 billion annually.⁸¹ Working parents with children under six earn \$1.2 billion every year.⁸² These estimates provide a snapshot of the vital role that working parents play in the economy.

It's helpful to think of early care and education this way. It is similar to roads, public works, and bridges because it is one of the economic infrastructures that enables labor force participation. If the state wants to meet the workforce demands of an economically competitive region, it must provide the infrastructure that allows parents to work outside the home.

More than 103,000 families have working parents. Together, they earn more than \$5.1 billion annually.

⁸¹ Based on Census 2000 median income by family type, employment status of householders by children and age, and average number of children in each family type in Hawai'i.

⁸² This estimate is derived from Census 2000 median income by family type, and families who have at least one child under 6. They may also have older children, so many are included in the estimate of families with children under age 18.

ENABLING CAREER DEVELOPMENT AND EDUCATIONAL ADVANCEMENT

Strengthening early care and education supports educational advancement for parents. This benefits:

- Parents through higher incomes
- Government through larger tax revenues, decreased parental reliance on government programs, and lower unemployment
- Businesses through a more skilled workforce and better productivity.

In a long-term study of low-income families who needed government assistance to meet basic family needs, mothers with children who participated in an intensive child development program, which included parental involvement, achieved higher educational and employment status than similar mothers whose children were not randomly assigned to the program.⁸³

Higher educational attainment for parents also reduces the likelihood of needing various government supports. A recent study investigating higher education opportunities for individuals transitioning from welfare to work found that 88 percent receiving welfare assistance who obtained four-year college degrees discontinued participation in welfare after earning their degree.⁸⁴ Unemployment is also less likely for those who have attained higher education. For example, while 9 percent of the nation's labor force with less than a high school diploma were unemployed between October 2002 and October 2003, 5.4 percent of those with high school graduation, 4.8 percent of those with an associate's degree or some college, and 3.1 percent of those with a Bachelor's degree or higher were unemployed.⁸⁵

Strengthening early care and education supports for parents so that they can attend post-secondary education programs benefits the economy.

Ensuring access to higher education for parents will not only help them remain employed but also allow Hawai'i to better meet its skilled labor force demands in the coming years—something it's currently unprepared for. In a Hawai'i Chamber of Commerce Survey of employers, 51 percent rated the quality of the workforce as fair to poor and 69 percent rated workforce availability as fair to poor.⁸⁶ Hawai'i's workers need access to skills training and higher education degrees to prepare them to enter the workforce as skilled professionals or to retrain them in mid-career for changing labor force demands. The availability of affordable, quality early care and education affects parents' ability to pursue their own schooling or training.

Because of an expected tightening in the labor force as the baby boom generation begins to retire, the Department of Business Economic Development and Tourism is working with the Governor's Workforce Development Council and the University of Hawai'i to develop a strategy and recommendations for increasing enrollment of working adults in post-secondary institutions. Currently, only 3.6 percent of high school graduates between ages 25 and 44 enroll in post-secondary education.⁸⁷ Clearly, for parents, who make up a significant portion of the emerging, dislocated, and incumbent workforce, early care and education options are critical to enable them to take advantage of these educational opportunities.

ON-CAMPUS EARLY CARE AND EDUCATION

Many colleges and universities in Hawai'i support parents' access to higher education by providing on-campus early care and education facilities. Unfortunately, the funding that makes these programs affordable to parent-students is often in jeopardy and on-campus programs frequently struggle to meet the needs of parents.

⁸³ Discussion of results of *The Abecedarian Study*, as cited on www.fpg.unc.edu/~abc/.

⁸⁴ T. Karier, *Welfare Graduates: College and Financial Independence*, Levy Economics Institute of Bard College, as cited in *Grassroots to Graduation: Low-income Women Accessing Higher Education*. Boston: Wellesley College Center for Research on Women and Women's Institute for Housing and Economic Development, 2003.

⁸⁵ U.S. Department of Labor. *The Employment Situation: October 2003*. Washington, D.C.: U.S. Department of Labor Bureau of Labor Statistics, 2003.

⁸⁶ Hawai'i Chamber of Commerce, Project J.O.B.S. (Join Our Business Success). *2003 Business Retention and Expansion Survey Results*.

⁸⁷ Department of Business, Economic Development, and Tourism. *2003 Report to the Legislature on Efforts to Increase the Number of High-skilled Jobs in Targeted Industry Clusters*. Honolulu: Department of Business, Economic Development and Tourism, 2003.

The University of Hawai'i provides child development centers on the Manoa, Honolulu, Kapiolani, Leeward, and Kauai campuses. Also, six of Hawai'i's seven community colleges offer on-campus early care and education for their staff and students. The community college system indirectly subsidizes the tuition of children in these programs by paying the salaries of roughly half the staff in these programs, which allows the programs to maintain high quality programs while keeping tuitions relatively low.

Approximately 50 percent of the children in these centers are eligible for federal early care and education assistance. In total, these child development centers have the capacity to serve 140 children statewide, but currently there are a significant number of infants and toddlers on waiting lists.

As Linda Buck, coordinator of three child development programs for Honolulu Community College notes, "Parents who attend Hawai'i's community colleges tend to be young with very young children. There are not a lot of early care and education opportunities for infants and toddlers in the community. On-campus early care and education programs for infants and toddlers and other children are essential to enable student-parents to go to school. However, due to insufficient resources, we struggle to meet the needs of student-parents and maintain the quality of early child development programs."⁸⁸

"Due to insufficient resources, we struggle to meet the needs of student-parents and maintain the quality of early child development programs."

Linda Buck, Coordinator-Early Childhood Programs, Honolulu Community College

Research also demonstrates that student-parents using on-campus early care and education:

- Have higher graduation rates than their counterparts on campus
- Are more likely to remain in school and graduate in fewer years
- Have higher grade point averages⁸⁹

Similarly, student-parents indicate that the availability of early care and education is critical to their decision to enroll in college.⁹⁰ Unfortunately, limited capacity in programs offered during non-traditional 9-5 hours prevents parents from enrolling in classes or trainings that are offered outside of the traditional workday.

ATTRACTING AND MAINTAINING BUSINESSES AND SKILLED YOUNG WORKERS

Today, Hawai'i's existing businesses experience shortages of qualified workers. In a Chamber of Commerce survey of businesses in Hawai'i:

- More than half reported that they experienced problems attracting employees
- Nearly one-fourth reported that they experienced problems retaining employees.⁹¹

⁸⁸ Interview. Linda Buck, Coordinator—Early Child Development Programs, Honolulu Community College. The National Economic Development and Law Center; November 2004.

⁸⁹ *Impact of Campus-based Child Care on Academic Success Student Parents at SUNY Community Colleges, 1989*, and *Child Development Center Participant Analyses, Bronx (New York City) Community College, 1994*. As cited by The National Coalition for Campus Children's Centers in their policy brief: *Campus Child Care Bill: Child Care Access Means Parents in School Act, S1151 and H.R. 3936*, 1999.

⁹⁰ National Coalition for Campus Children's Center. Policy Brief entitled *Campus Child Care Bill: Child Care Access Means Parents in School Act, S1151 and H.R. 3936*, 1999.

⁹¹ Hawai'i Chamber of Commerce, Project Jobs—Enriching Hawai'i's Workforce by Growing Your Business. *2003 Business Retention and Expansion Survey Results*.

And projected economic growth indicates an increased need for qualified workers to come to and remain in Hawai'i. The economy requires more than 20,000 graduates annually, but there are only slightly

“Since most of the job demand over the decade will be for individuals with education and training beyond high school, the size of the Hawai'i educational pipeline...indicates the likelihood of significant skill shortages unless we make significant changes.”

Mike Rota, University of Hawai'i

over 8,000 graduates with college degrees who come to or stay in Hawai'i to work every year.⁹² As Mike Rota of the University of Hawai'i presented, “Since most of the job demand over the decade will be for individuals with education and training beyond high school, the size of the Hawai'i educational pipeline, particularly at the postsecondary level, indicates the likelihood of significant skill shortages unless we make significant changes.”

One of the major barriers that businesses felt impeded their ability to attract employees to Hawai'i was poor public schools. Professionals with children don't want to come or stay because of it. As the Chamber of Commerce states, “A near-unanimous 82 percent

(of business) rated public schools as poor to fair, in great need of improvement. This is a major issue for businesses trying to recruit highly skilled professionals with children to Hawai'i.”⁹³

Improving early care and education makes Hawai'i a more attractive place to live and work, and maintains Hawai'i's competitiveness in attracting businesses to the state.

While Hawai'i's climate, environment and culture are considerable strengths and draws, other economic issues may impede attracting and retaining businesses. As a recent report concludes, “Hawai'i's weaknesses in other areas—public education, growing income disparity, public works infrastructure, traffic, cost of living, and low civic participation to name a few—will dissuade workers and

employers from relocating to Hawai'i and pressure homegrown talent to leave.”⁹⁴ A strong education system which includes quality early care and education can play a role in building economic infrastructures that are attractive to businesses and employees thinking of relocating to Hawai'i.

A DRIVER OF INCREASED LABOR FORCE PRODUCTIVITY

Because the availability of affordable, quality early care and education has positive effects on businesses' bottom lines. Individual businesses use early care and education as a business tool to:

- Increase employee recruitment and retention
- Reduce absenteeism

INCREASING EMPLOYEE RECRUITMENT AND RETENTION

Attracting and retaining staff is a priority, particularly for companies that rely on highly skilled workers. Non-portable benefits, such as early care and education, are effective business tools to increase recruitment and retention. Family-friendly policies indicate a company's commitment to the well-being of potential and existing employees and their personal lives, which make the company more attractive in a competitive workforce market. Company values are particularly important when trying to attract highly specialized workers, whether or not they have young children.

A national study of companies that offer early care and education centers to their employees found that turnover was nearly one-half in those who used the center compared to other workers.⁹⁵ The survey also found that more than half of the center users had been with their company for more than five years

⁹² Michael Rota. “Meeting Hawai'i's Critical Workforce Needs” Presented at Hawai'i Institute for Public Affairs. Fort Shafter January 20, 2004. Available at www.hipaonline.com/Rota_JobsSummit.PDF.

⁹³ Ibid.

⁹⁴ Hawaii Institute for Public Affairs. *Policy Review: A New Economy in Hawai'i*, March 2003.

⁹⁵ Bright Horizons Family Solutions. *The Real Savings from Employer-sponsored Child Care: Investment Impact Study Results*. Boston, MA: Bright Horizons, 2003.

and nearly half had been with their company for more than ten years. In a national survey, 19 percent of employees at companies with early care and education programs indicated that they have turned down another job rather than lose work-site early care and education.⁹⁶

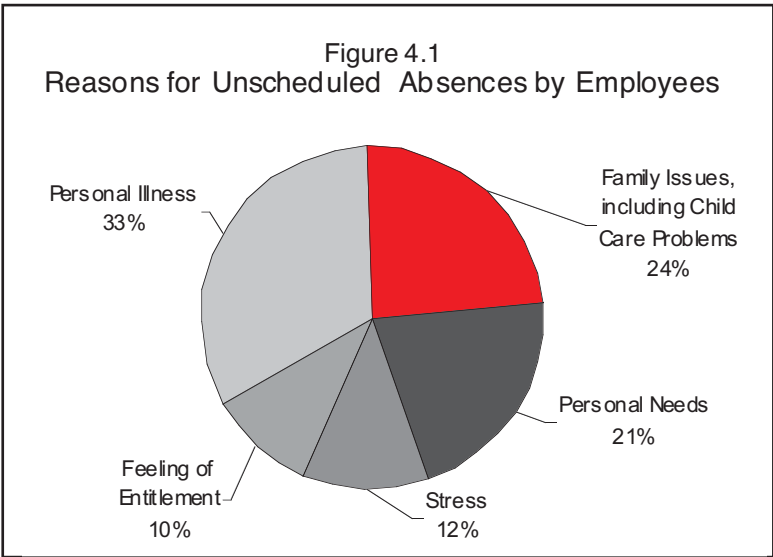
A national study of companies that sponsor early care and education centers to their employees found that turnover was nearly one-half in those who used the center compared to other workers.

While the number of employers offering early care and education benefits as a means to attract and retain quality employees grows, most employers miss out on this opportunity. In a survey of businesses by the U.S. Chamber of Commerce, only 32 percent reported actively assisting “their employees in addressing employment challenges such as, child or dependent care, transportation or housing.”⁹⁷ In a survey of employees, a human resources and consulting firm found a disconnect between employers and employees. Caring for dependents was one of the top six benefits employees desire. However, employers in a similar survey did not consider it essential.⁹⁸

When employees do leave because of early care and education problems or transfer to a company with better options, companies lose human capital and incur high turnover costs. A meta-analysis of 15 different turnover cost studies found that average turnover costs for a full-time employee making \$8 per hour are over \$9,000, 56 percent of the annual wages for that employee.⁹⁹ For salaried employees, costs are at least 150 percent of the base salary, and increase for higher-paid and more valued staff.¹⁰⁰

REDUCING ABSENTEEISM

Unscheduled absenteeism in 2002 cost small businesses an average of \$60,000 annually and large companies more than \$3.6 million, according to a national survey of human resource executives.¹⁰¹ While one-third of unscheduled absences were due to personal illness, one-quarter were due to family issues, including children’s illness and unscheduled breakdown of early care and education arrangements (see Figure 4.1).



Currently, approximately 16 percent of major employers nationally offer sick or emergency back-up child care to reduce absenteeism of their employees.¹⁰² These programs provide a significant return on investment. For example, PNC Financial Services Group, which is based in Pittsburgh, Pennsylvania, found a 91.7 percent return on investment from a newly implemented back-up program. PNC recovered 3,060 parent-days at work and received positive feedback from parent-employees, their coworkers, and their managers, who report less distraction and more loyalty.¹⁰³

⁹⁶ Simmons College, *Benefits of Work-Site Child Care*, 1997, as cited by Bright Horizons Family Solutions.
⁹⁷ U.S. Chambers of Commerce, Center for Workforce Preparation. *Keeping Competitive: Hiring, Training, and Retaining Qualified Workers*, 2001.
⁹⁸ Merk. *Using Benefits to Attract and Retain Employees*, 1999. As cited on www.probenefits.com.
⁹⁹ Sasha Corporation. Turnover costs in 15 different studies. www.sashacorp.com. November 2003.
¹⁰⁰ W. Bliss. *The Business Cost and Impact of Employee Turnover*. New Jersey: Bliss & Associates, Inc., 1999, www.blissassociates.com.
¹⁰¹ Harris Interactive. *The 2002 CCH® Unscheduled Absence Survey*. Riverwoods, IL: CCH®, 2003.
¹⁰² Hewitt Associates. “Hewitt Study Shows Work/Life Benefits Continue to Grow Despite Slowing Economy” April 23, 2001. www.was.hewitt.com
¹⁰³ K. D’Appolonia. *The Business Case for Back-Up Child Care*. PNC Financial Services Group. Presented at the 2003 WorkFamily Congress in New York, NY, October, 2003.

EMPLOYER OPTIONS FOR EARLY CARE AND EDUCATION

Locally, few employers in Hawai'i offer on- or near-site early care and education, although there are some notable exceptions, such as the University of Hawai'i, Mauna Lani Resort, and the City and County of Honolulu. The Government Services Administration (GSA) contracts with Rainbow Schools to provide early care and education programs in a rent-free facility in the Federal Building in Honolulu. By avoiding costs for space, utilities, and furniture, Rainbow Schools is able to provide high-quality programs while maintaining a relatively low tuition. The children of federal employees receive priority in the program. There are long waiting lists for children under two years. In 1986, the city and county of Honolulu built an on-site early child development center for employees in downtown Honolulu, which has the capacity to serve 264 children, 15 percent of whom are the children of city and county employees.

Mauna Lani Resort located in the remote Kohala Coast of the Big Island also provides near-site early care and education for its employees. The preschool was originally entirely for employees, but a softening economy in the 1990's led the resort to lease the space to Seagull Schools and open the center up to the community which desperately needed an early care and education program. Currently, enrollment for the preschool is predominately community-based, but a significant number of children whose parents are employed by the resort still attend the preschool.¹⁰⁴

Onsite early care and education is not the only benefit option for employers trying to improve recruitment and retention. For example, First Hawaiian Bank provides employees with a early care and education subsidy plan that reimburses employees for early care and education costs by matching employees dollar for dollar for up to a certain amount per child per year. Kapi'olani Jobs, a health care industry employer based in Honolulu, offers employees a pre-tax flexible spending account, which enables them to set aside tax-free dollars for early care and education costs. Similarly, Crazy Shirts, based in Aiea, offers flexible spending accounts and job modification options so that parent-employees can adjust their work schedules to balance work with personal needs, including caring for their children. This helps recruit and retain the best staff.¹⁰⁵

But the overwhelming majority of businesses in Hawai'i are small businesses, and they face particular challenges to providing employee benefits, including early care and education. Most employee benefits have an economy of scale for larger companies, but benefits are less economically efficient for smaller companies. On-site early care and education, for example, is not financially feasible for the majority of smaller employers. There are cost-efficient ways, however, that small employers can support the early care and education needs of their employees. For example, three low-cost options that may work for smaller employers who are trying to increase retention, loyalty, morale and productivity. Small businesses can:

- Join together to support an early care and education program or programs that serve employees from several participating companies
- Create or join existing community partnerships to work towards improving the affordability, quality, and supply of early care and education
- Offer pre-tax flexible spending accounts for early care and education costs¹⁰⁶

¹⁰⁴ Interview. Chuck Larson, Executive Director of Seagull Schools. The National Economic Development and Law Center; November 2004.

¹⁰⁵ Personal communication, Tim Casey, Crazy Shirts. 2004.

¹⁰⁶ Hawaii Business Guide to Child Care.

HAWAI‘I’S FUTURE LABOR FORCE

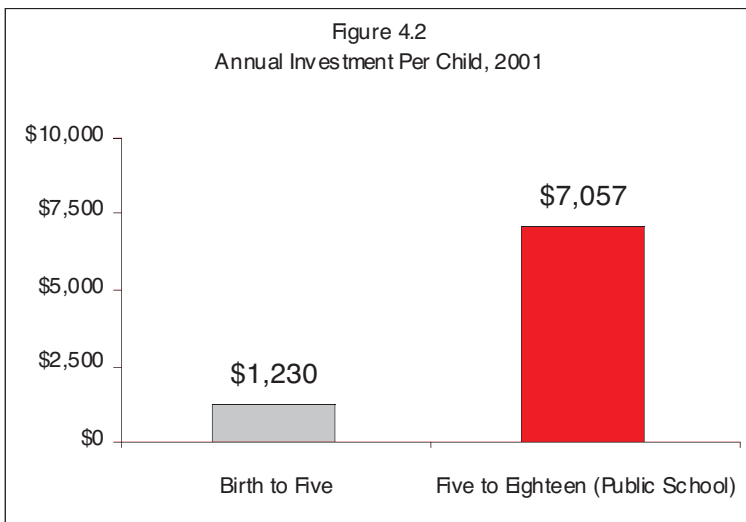
There is a demonstrable link between high-quality early care and education programs and school readiness, which is clearly linked to success in traditional K-12 education. The 2004 Hawai‘i State school readiness assessment found that 4 out of 10 children were not well prepared for kindergarten.¹⁰⁷ While not every early care and education program can guarantee lifelong success for its participants, quality programs can increase children’s ability to enter traditional K-12 schooling ready to continue learning so that they are prepared for future opportunities.¹⁰⁸

The National Academy of Sciences recently brought together a committee of experts to synthesize research on early childhood development. They agreed that “the effects of early care and education derive not from its use or nonuse but from the quality of the experiences it provides to young children.”¹⁰⁹ For example, a national survey found that young children who attended higher quality and more stable early care and education centers had the following characteristics through elementary school, compared to peers in care settings rated as having poorer quality:¹¹⁰

- Improved math and language ability
- Enhanced cognitive and social skills
- Fewer behavioral issues

The 2004 Hawai‘i State school readiness assessment found that 4 out of 10 children were not well prepared for kindergarten.

While more research will enable a better understanding of the long-term effects of high-quality early care and education, current findings indicate that investments in early education have greater returns than educational investments in later life because younger people have more time to generate returns on investments and because “skill begets skill.”¹¹¹ Despite the benefits of quality early education, however, public and private investment for children between birth and age five is well below that for children between 6 and 17. In 2001, for example, Hawai‘i public and private expenditures on early care and education for children between birth and age five were \$1,230 per child annually compared to \$7,057 per child in public schools (see Figure 4.2).¹¹²



¹⁰⁷ Good Beginnings Alliance. *The 2004 School Readiness Assessment*. Honolulu, 2004.

¹⁰⁸ J. Brooks-Gunn. “Do You Believe in Magic? What We Can Expect from Early Childhood Intervention Programs.” *Social Policy Report*, 17, 1. Society for Research in Child Development, 2003.

¹⁰⁹ J. Shonkoff and D.A. Phillips, Editors. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington, D.C.: National Academies Press, 2000, p. 307.

¹¹⁰ E. S. Peisner-Feinberg, M. R. Burchinal, R. M. Clifford, M. L. Culkin, C. Howes, S. L. Kagan, and N. Yazejian. “The Relation of Preschool Child-Care Quality to Children’s Cognitive and Social Development Trajectories through Second Grade.” *Child Development*, September/October 2001, Volume 72, Number 5, Pages 1534-1553. Quality was assessed in this study using the following criteria: classroom quality measures using the Early Childhood Environment Rating Scale (ECERS), teacher sensitivity using the Caregiver Interaction Scale (CIS), child-centered teaching style using Early Childhood Observation Form (ECOF), teacher responsiveness using Adult Involvement Scale (AIS). In addition, teacher-child relationship and child assessment measures were used.

¹¹¹ James J. Heckman and Aaron Wildavsky Forum. Policies to Foster Human Capital Joint Center for Poverty Research working paper, Northwestern University/University of Chicago, page 39.

¹¹² T. Vast. Financing Strategies to Support a Coherent Early Care and Education System. Honolulu: Hawai‘i Community Foundation, July 2003, Page i.

Government and economic development leaders have openly discussed the need for the state to ensure that it has a skilled workforce prepared for the economic demands of tomorrow. These recent efforts are more likely to succeed if there is an understanding that quality early care and education is a critical component of that education system. For example, the Department of Business, Economic and Tourism's vision for economic development in the 21st Century Economy highlights the "educational process" as one of three

"Early learning begets later learning and later success."

James J. Heckman, Nobel Prize-Winning Economist, University of Chicago

"(The nation) should redefine education as a process that begins at birth and encompasses all aspects of children's early development."

The Committee for Economic Development (CED)

key players in Hawai'i's New Millennium Growth Strategy. However, the strategy relies entirely on the K-12 system, community colleges, and universities for "producing a high quality workforce that can analyze and solve problems, work cooperatively and contribute to the economic prosperity of the state." Including quality early care and education in preparing children for success will benefit the future economy.

The Committee for Economic Development (CED), a national nonpartisan research and policy organization of 250 business leaders and educators highlights the need for an inclusive education system, "CED urged the nation to view education as an investment, not an expense, and to develop a comprehensive and coordinated strategy of human investment. Such a strategy should redefine education as a process that begins at birth and encompasses all aspects of children's early development, including their physical, social, emotional, and cognitive growth."¹¹³ Enterprise Honolulu, Honolulu's economic development agency, recognizes that a critical factor for the island's economic success includes a quality education system that includes pre kindergarten and affordable early care and education.¹¹⁴ The Hawai'i Institute for Public Affairs also identifies "lifelong learning" as new education strategy that will assist Hawai'i's success in the "new economy."¹¹⁵ Preparing children to learn continually throughout the lifespan depends on a solid foundation in early childhood.

AN INVESTMENT WITH A SIGNIFICANT FINANCIAL RETURN

Money spent on the ECE industry is not just an expense, it's an investment. Cost-benefit analyses of three long-term, high-quality, early education intervention programs indicate that there are significant future public savings when money is invested in high-quality early care and education, particularly for low-income children. In the three studies discussed below, common quality elements include qualified staff comprised of teachers with specific training in early education, low teacher turnover rates, and classrooms with low child-to-teacher ratios.¹¹⁶ In the Abecedarian Study, a group of low-income children was randomly assigned to an

¹¹³ Committee for Economic Development (2002). As cited from *Exceptional Returns* by the Economic Policy Institute, 2004.

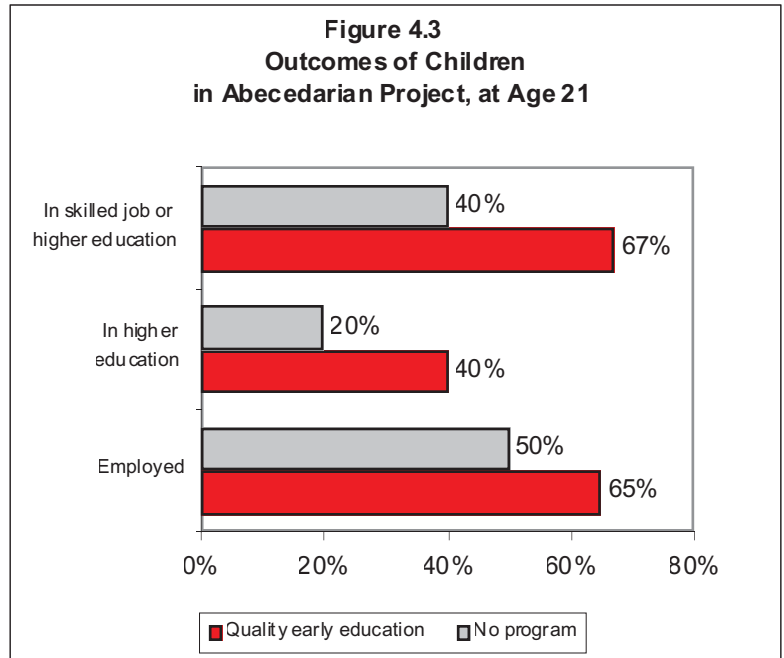
¹¹⁴ M. Fitzgerald. *Hawaii Economy Perspectives & EH Strategies*, Enterprise Honolulu.

¹¹⁵ Hawaii Institute for Public Affairs. *Policy Review: A New Economy in Hawai'i*, March 2003.

¹¹⁶ While experts differ on the precise definition of what constitutes "high quality" for defining early care and education programs, there is general agreement that programs with these three elements qualify.

early intervention program and a second group of participants was not offered the program. The investigators found that children who participated in the early intervention program were, at age 21, significantly more likely to be in a high-skilled job or in higher education (see Figure 4.3).¹¹⁷

In another long-term study, the Chicago CPC Study, low-income children in a high-quality, child-focused intervention program were less likely to drop out of high school, be in special education, repeat a grade, or be arrested as juveniles than peers.¹¹⁸ A third study, The High/Scope Perry Pre-School Project, released findings when comparing adults at age 40 who received high-quality early care and education as young children with peers who did not. The study found that children in the group who received early childhood education instruction earned more money, were more likely to have a savings account, and less likely to be repeat criminal offenders than their peers who were not randomly assigned to the program.



Economists have analyzed the overall costs and benefits of these three early care and education programs, revealing that significant cost savings were realized in each program (see Table 4.1 for a summary).¹¹⁹ A more recent cost-benefit analysis of the Perry Preschool Project at age 40 found that the high-quality programs returned as much as \$17 on every \$1 spent in early childhood.¹²⁰

Table 4.1
Economic Benefits of Early Education Programs for Low-income Children

| | <i>Number of Years of Program</i> | <i>Average Annual Cost per Child</i> | <i>Total Cost of Program per Child</i> | <i>Lifetime Benefit to Society per Child</i> |
|--------------------------|-----------------------------------|--------------------------------------|--|--|
| Chicago CPC Study | 2, half-day | \$3,500 | \$7,000 | \$48,000 |
| Perry Pre-School Project | 2, half-day | \$6,000 | \$12,000 | \$108,000 |
| Abecedarian Project | 5, full-day | \$7,200 | \$36,000 | \$136,000 |

All dollar values are based on a three percent discount rate.

¹¹⁷ See The Frank Porter Graham Child Development Institute at the University of North Carolina at Chapel Hill, *Early Learning, Later Success: The Abecedarian Study*. www.fpg.unc.edu/~abc/.

¹¹⁸ A. J. Reynolds, J. A. Temple, D. L. Robertson, E. A. Mann. "Long-term effects of an early childhood intervention on educational achievement and juvenile arrest- A 15-year follow-up of low-income children in public schools." *Journal of American Medical Association*, May 19, 2001, v. 285, no. 18, pp. 2239-2346.

¹¹⁹ Reynolds, Arthur J., Temple, Judy A., Robertson, Dylan L., Mann, Emily A. "Age 21 Cost-Benefit Analysis of the Title I Chicago Child-Parent Center Program: Executive Summary", 2001, and Reynolds, A. J., Temple, J. A. Robertson, D. L., Mann, E. A. & Ou, S. "Prevention and cost-effectiveness in the Chicago Child-Parent Centers." Paper presented at the Biennial Meeting of Society for Research in Child Development, Tampa, FL, April 2003. Values are in 1998 dollars, and benefits are based on a 3% discount rate evaluated at beginning of pre-school participation. Barnett, Steven, W. *Lives in the Balance: Age 27 benefit-cost analysis of the High/Scope Perry Preschool Program*. Ypsilanti, MI: High/Scope Press. Values are in constant dollars and based on a 3% discount rate. Leonard N. Masse and W. Steven Barnett. *A Benefit Cost Analysis of the Abecedarian Early Childhood Intervention*. New Brunswick, NJ: National Institute for Early Education Research, 2002. Values are in 2002 dollars, and are discounted at 3%.

¹²⁰ L. J. Schweinwart. *The High/Scope Perry Preschool Study through age 40: Summary, Conclusions, and Frequently Asked Questions*. High/Scope Educational Research Foundation. Available at www.highscope.org.

These findings indicate the economic value of investing in quality early care and education, especially for low-income children. However, children in middle- and high-income families also experience academic problems, including significant grade retention and high school dropout rates.¹²¹ Nationally, 12 percent of middle-income children are held back at some point during school, and 11 percent drop out of school

Public Savings Associated with Quality Early Care and Education are Significant

- Participation rates of remedial education in the traditional school system, criminal justice system, and welfare systems decrease
- Adults earn more, translating to a larger tax base
- Criminal justice costs and tangible costs to victims of crime are reduced
- Child welfare spending associated with child abuse and neglect decrease
- Health costs from smoking and other causes are brought down

before graduating high school.¹²² One study shows that there is a linear relationship between income and school readiness.¹²³ A third of middle-income children and a fourth of upper-middle-income children lack “key pre-literacy skills when they enter kindergarten.”¹²⁴ These findings provide evidence that high quality preschool programs may be cost effective for

children in most income brackets. As one economist notes, “If you were to get one-tenth the public savings from high quality preschool for middle-income children (as you do for low-income children), high quality preschool programs would still be cost effective.”¹²⁵

After-school programs for school-age children also save public sector dollars. A review of multiple research studies to evaluate the effects of after-school programs showed significant gains in school engagement, school attendance, academic performance, and positive youth development.¹²⁶ A cost-benefit analysis found financial benefits from improved school performance, increased compensation, reduced juvenile and adult criminal activity, and reduced welfare costs outweighed the costs of increased attendance at school and the cost of programs.¹²⁷

In a George Mason University study, 91 percent of police chiefs surveyed agreed that “If America does not make greater investments in after-school and educational child care programs to help children and youth now, we will pay more later in crime, welfare, and other costs.”¹²⁸ Additionally, in a survey of the nation’s law enforcement leaders, 69 percent chose providing “more educational child care programs for preschool age children and after-school programs for school age youngsters” as the option with the greatest impact in reducing youth violence and crime.¹²⁹ Locally, Ted Sakai, Warden at Waiawa Correctional Facility notes, “I have had a unique perspective on the importance of investing in young children in our community. I often wonder how the lives of criminal offenders would have been if they were nurtured and guided differently when they were young. I hope we can create

“I often wonder how the lives of criminal offenders would have been if they were nurtured and guided differently when they were young.”

Ted Sakai, Warden at Waiawa Correctional Facility

¹²¹ W.S. Barnett. *Characteristics of Successful Early Education Programs*. Presentation at *The Economics of Early Childhood Development: Lessons for Economic Policy* conference, Federal Reserve Bank of Minneapolis, October 17, 2003. Information is based on the National Center for Education Statistics.

¹²² Coley, R.J. *An Uneven Start*. Educational Testing Service, Princeton, New Jersey 2002. As cited in *Kids Can’t Wait to Learn: Achieving Voluntary Preschool for All in California*, Preschool California, 2004.

¹²³ Ibid.

¹²⁴ Ibid.

¹²⁵ W.S. Barnett. Preschool-for-All Hearing, Sacramento, CA, August 4th, 2004.

¹²⁶ B.M. Miller. *Critical Hours: Afterschool Programs and Educational Success*.

¹²⁷ W.O. Brown, S.B. Frates, I.S. Rudge, and R.L. Tradewell. *The Costs and Benefits of After-school Programs: The Estimated Effects of the After School Education and Safety Program Act of 2002*. Claremont, CA: The Rose Institute, September, 2002.

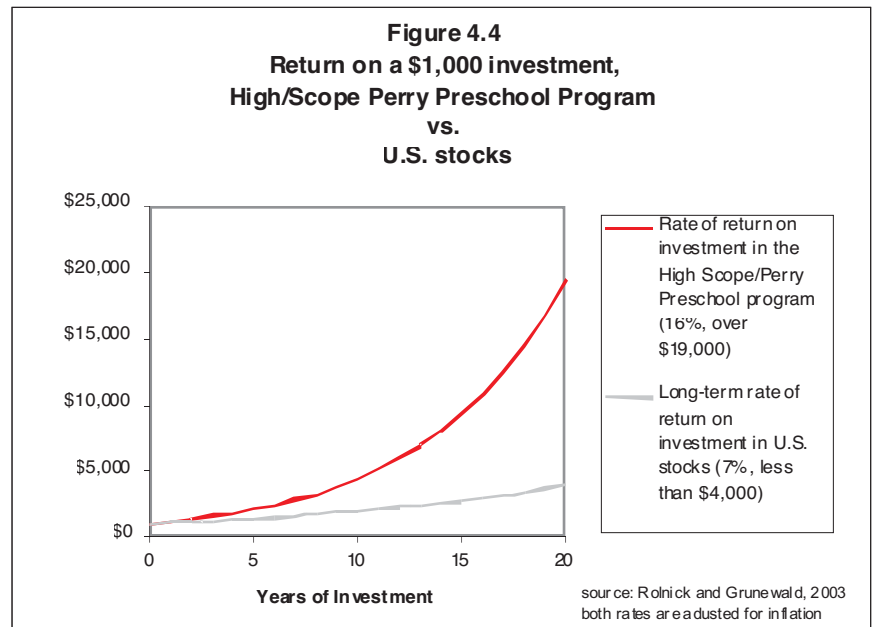
¹²⁸ Fight Crime, Invest in Kids, *Poll of Police Chiefs conducted by George Mason University Professors Stephen D. Mastrofski and Scott Keeter*. Washington, DC, November 1, 1999.

¹²⁹ Mason-Dixon Polling and Research. *Hawai’i Law Enforcement Leadership Survey*, 2002.

a path for their children that they themselves were not afforded. All of them deserve a chance in life. The investment we make [in children] will give them a chance to take a path in life different from the one taken by their fathers."¹³⁰

These findings suggest that increasing the public support for early care and education could save money in the department of public safety (annual budget of \$163.4 million in SFY 2002-03 for corrections and law enforcement). It would also make a dent in the state's health care spending (\$696 million for Medicaid in Fiscal Year 2002) and in the special education budget (which cost \$101 million of the Department of Education budget in 2002-03).¹³¹

A recent study by economists at the Federal Reserve Bank in Minneapolis used the High/Scope Perry Preschool Project findings at age 27 to estimate the returns on public investment from reduced spending and increased tax payments resulting from quality early education and care. Quality early childhood development programs for low-income children generate a 16 percent rate of return on investment, 12 percent of which is a public rate of return.¹³² They found that, "Most of the numerous projects and initiatives that state and local governments fund in the name of creating new private businesses and new jobs result in few public benefits. In contrast, studies find that well-focused investments in early childhood development yield high public as well as private returns."¹³³ They demonstrate that the High/Scope Perry Preschool Program's 16 percent return on investment when adjusted for inflation is considerably higher than the long-term return on U.S. stocks, 7 percent (see Figure 4.4).¹³⁴



“There are some areas of clear agreement between market economists and child development researchers. The time has come to invest in young children, and there are substantial gains to be made from these investments if they are made wisely.”

Jack Shonkoff, Co-Editor of From Neurons to Neighborhoods¹³⁵

¹³⁰ Interview. Ted Sakai, Warden at Waiawa Correctional Facility. Good Beginnings Alliance, November 2004.

¹³¹ Department of Public Safety information from the *2003 Annual Report*. Honolulu: State of Hawai'i Department of Public Safety, 2004, p. 40. Medicaid spending taken from the Association of State Budget Officers. *2002 State Expenditures Report*. Washington, D.C.: National Association for State Budget Officers, 2002. Special Education spending is from the Hawai'i Department of Education. Biennium Operating Budget 2003-2005. Honolulu, Department of Education, 2002, p. 320.

¹³² A. Rolnick and R. Grunewald. *Early Childhood Development: Economic Development with a High Public Return*. Fedgazette. Minneapolis, MN: Federal Reserve Bank of Minneapolis, January, 2003.

¹³³ Ibid.

¹³⁴ Ibid.

¹³⁵ J. Shonkoff. Closing remarks at *The Economics of Early Childhood Development: Lessons for Economic Policy* conference, Federal Reserve Bank of Minneapolis, October 17, 2003.

SECTION FIVE:

Recommendations

The central message of this study is that early care and education centers, preschools, and other providers make a significant economic contribution to Hawai'i. Specifically, the ECE industry:

- Makes a substantial direct contribution to the local economy, sustaining nearly 9,400 jobs and more than \$240 million in gross receipts each year.
- Supports the current labor force of all industries in Hawai'i by making it easier for parents to participate in the labor force, furthering their career development and educational advancement, and attracting and retaining young working families.
- Drives labor force productivity by decreasing absenteeism, reducing turnover, and enhancing recruitment at existing businesses.
- Cultivates Hawai'i's future workforce by improving the cognitive skills and emotional well-being of children and ensuring that they enter the K-12 school system ready to continue learning.
- Offers a financial return by reducing future public spending in such areas as criminal justice, remedial education, unemployment, and welfare.

INDUSTRY CHALLENGES

When the ECE industry meets the demand for quality, affordable programs, parents, business, government, and the economy all benefit. Yet, the industry faces several challenges to maximize its economic benefit, including:

- Lack of integration with economic development planning and funding
- Lack of business supports which enhance quality, efficiency, and capacity
- Lack of access to capital to develop or purchase quality facilities
- Insufficient investment to make quality programs affordable for all

These barriers exist in part because, up until now, the economic importance of early care and education has not been fully understood or appreciated. Together, these challenges have restricted the industry's growth, hindered the delivery of quality services, and limited the economic impact of early care and education in Hawai'i.

RECOMMENDATIONS

To meet the challenges and unlock the full potential of early care and education so that Hawai'i's economy will benefit, all the stakeholders—government, business, or the ECE industry itself—have to collaborate. Some of the recommendations even call for the formation of new partnerships. A separate section is devoted to exploring potentially powerful new alliances.

RECOMMENDATION #1:

Make early care and education an integral component of economic development planning and funding.

Traditionally, early care and education has not been viewed as part of the economic infrastructure, nor as an industry with a large economic impact. So it was left out of economic development planning, funding, and other activities. But, as this study illustrates, early care and education is a critical piece of the economic infrastructure. It enables people to work and enhances the productivity of all industries. It should therefore be included in planning and funding for economic development.

FOR GOVERNMENT

First Steps

- Government agencies should invite early care and education leaders to sit on the economic development boards and advisory committees that shape economic development plans and make economic development funding decisions.
- Economic development agencies should include early care and education in community needs assessments and other studies that are the basis of economic development planning and funding decisions.
- State and County officials should add language to existing laws and ordinances on zoning, planning, and permitting concerning the importance of planning for communities' early care and education needs.
- Early care and education should be included in plans that guide federal economic development funding such as State and County Comprehensive Economic Development Strategies and County Consolidated Plans.

Longer Term

- Early care and education projects should be funded by economic development programs such as Economic Development Administration grants and Community Development Block Grants.

FOR BUSINESS

First Steps

- Business organizations that regularly survey employers, such as the Chamber of Commerce and Enterprise Honolulu, should insert questions related to the need for early care and education and its impact upon businesses and workers.
- Business and industry associations can take an active role in crafting early care and education proposals for incorporation into economic development plans.

Longer Term

- Businesses relocating to new areas should encourage development of near-by early care and education facilities for employees.
- Large employers should create on-site early care and education programs or make employer contributions to cover part of workers' early care and education costs. Such programs can help attract and retain a quality workforce and boost productivity.
- Small employers should find ways to offer early care and education benefits, such as pre-tax, flexible spending accounts or joint programs that serve employees from more than one company.

First Hawaiian Bank's Share Care Program allows employees to defer up to \$2,600 of their pay for childcare on a pre-tax basis. The company matches up to \$2,400 of the employee's contribution. First Hawaiian reports that the program helps attract and retain employees in a highly competitive financial services labor market.

FOR THE ECE INDUSTRY

- Early care and education program directors should increase their participation in local Chambers of Commerce, County Workforce Investment Boards, County Economic Development Boards, and other agencies to ensure that the industry is included in economic development planning and funding.
- Early care and education leaders should discuss with business and economic development leaders the role the ECE industry has in the economy.

Recommendation #2:

Ensure access to business assistance for early care and education establishments.

In order to succeed and grow, small companies require access to basic supports like business planning, staff training, and freedom from excessive government regulation. In addition, business training and technical assistance are often critical to the success of small firms and the entrepreneurs who lead them.

Many programs exist to provide small companies and important industries with these types of assistance. However, because early care and education providers are rarely viewed as businesses, they often lack access to such supports, and may face cumbersome regulations that can hamper business growth. The following steps would help place early care and education on equal footing with other small businesses and important industries by providing appropriate forms of business assistance.

FOR GOVERNMENT

First Steps

- State and County planning officials should review existing laws and ordinances related to zoning, planning, and permitting to remove unnecessary barriers to the creation of early care and education establishments.
- State and County workforce development agencies should encourage the use of federal funds for job training and workforce development initiatives that increase skills, support better wages and reduce turnover in the ECE industry.

Longer Term

- State child care licensing and County building departments should improve coordination and create a single set of consistent requirements for new early care and education businesses.

FOR BUSINESS

First Steps

- Business leaders should invite early care and education providers to technical training classes.
- Businesses should encourage their management team to volunteer as business mentors to ECE industry providers.

FOR THE ECE INDUSTRY

First Steps

- Early care and education supporters, such as PATCH, HAAYC, and the Good Beginnings Alliance, should work with small business trainers to create a curriculum that covers the educational, licensing, and business aspects of starting and operating early care and education establishments.
- Industry advocates should create a continuum of support focused on small and home-based providers, offering assistance in business start-up, program development, and workforce training.

Funded by the Samuel N. and Mary Castle Foundation, and housed at Chaminade University, the Castle Colleagues program provides administrative training and professional development to Hawaii's pre-school directors.

Longer Term

- Industry advocates should develop a cooperative-franchise model of early care and education to bring small and home-based providers together by offering group marketing, group employee benefits, start-up business plans, and uniform quality and training standards.
- Industry advocates should expand existing models of business mentorship programs and/or create a leadership academy for preschool directors.

FOR OTHER STAKEHOLDERS

First Steps

- Government-funded business assistance programs like the Small Business Administration (SBA) and the Small Business Development Centers (SBDCs) can ensure that early care and education entrepreneurs have full and equal access to no-cost business planning assistance.

Longer Term

- Intermediary organizations should provide assistance to nonprofit and community-based organizations looking to start childcare centers and preschools.
- Industry advocates should facilitate the formation of an association of small and home-based providers of early care and education to encourage peer support, professional development, and uniform standards of quality.

Recommendation #3:

Make affordable financing and other supports available for the acquisition or development of quality early care and education facilities.

Many providers of early care and education struggle to acquire quality facilities. Buildings with appropriate layout, design, square footage, and location are often beyond the financial means of providers. Most end up in low-cost spaces such as school or church classrooms. Purchasing or developing a facility is an attractive alternative because facilities can be built-to-suit, and because owning may be cheaper than leasing in the long run. However, many providers lack assets or cash flow sufficient to qualify for a conventional mortgage.

Loans with below-market interest rates, guarantees, or flexible terms are available to companies in other important industries (like agriculture and high technology), but these programs are generally not accessible to early care and education providers. Government, financial institutions, and alternative lenders can do much to increase the availability of capital for quality early care and education facilities.

FOR GOVERNMENT

First Steps

- Existing government programs that offer affordable loans like the Office of Hawaiian Affairs Native Hawaiian Revolving Loan Fund and the Small Business Administration 7a Loan Guarantee program can work to make their products accessible to early care and education providers.

Longer Term

- State and County planning offices should explore an exaction or linkage fee requiring developers to build on-site early care and education facilities or contribute to an early care and education facilities fund for new development projects exceeding a certain size.
- Early care and education facilities could be sited at all new transportation hubs and affordable housing projects.

Article X, Section I of the Hawai'i State Constitution allows special purpose revenue bonds to assist early education facilities operated by nonprofit organizations. However, providers cannot make use of the provision because they lack expertise in public finance; consistent revenue streams to bond against; and the time shepherd a bond through the legislature.

FOR BUSINESS

First Steps

- Banks, credit unions, and other commercial financial institutions should market their financial products and services to early care and education providers. Alternative lenders like the Pacific Gateway Center Microloan Program and Lokahi Pacific can do the same.

Longer Term

- Private developers should be asked to include space for child care services in new transit, housing, and commercial developments, particularly in low-income areas.

FOR THE ECE INDUSTRY

First Steps

- Industry advocates should study the market demand for affordable financing, and the feasibility of creating new loan products for early care and education facilities. The information would encourage conventional and alternative lenders to expand the products and services available to the ECE industry.
- Industry advocates can create a continuum of support for center operators seeking to acquire or develop facilities, linking them to experienced financiers, architects, landlords, and sources of development assistance.

Longer Term

- Industry advocates should work with landlords, property managers, developers, brokers, and other real estate professionals to highlight the fact that early care and education providers are attractive tenants and a valuable amenity in new development projects.
- Industry advocates should convene early care and education providers and alternative lenders to develop applications for funding from the National Community Capital Association \$11.4 million early care and education facilities loan program, and the U.S. Department of Treasury's New Markets Tax Credit Program.
- Industry advocates should sponsor the creation of a new nonprofit specializing in early care and education center facilities financing and development. The entity could design and build new early care and education centers, then lease or sell the facility at below-market rates to center operators.

In 2003, the Packard Foundation and the Low Income Investment Fund launched Affordable Buildings for Children's Development (ABCD), to build a comprehensive financing system for child care facilities in California. Utilizing existing organizations, ABCD provides financing, technical assistance, and construction advice to center operators with a goal of creating 15,000 early care and education spaces in California in five years.

NEW ALLIANCES

Historically, early care and education and economic development have stood worlds apart. No more. The recommendations above illustrate that supporting the economic impact of early care and education will require new alliances that bridge this divide. The following are examples of new partnerships that may prove critical as the two fields move forward and closer:

- **Economic development agencies and early care and education advocates.** Many of the recommendations above call for the integration of the ECE industry with economic development activities. Developing closer relationships through overlapping board membership, advisory committees, or joint initiatives will be a necessary step toward ensuring that early care and education fully supports economic development.
- **Small business and early care and education intermediaries.** Several agencies exist to provide early care and education centers and preschools with support in licensing, curriculum development, and educational standards. Few of these agencies provide business training or technical assistance. Conversely, agencies that specialize in small business assistance — the SBA, SBDCs, and others — offer a wealth of business knowledge, but lack the ability to provide guidance on curriculum, quality standards or licensing. Rarely have these two kinds of intermediaries joined forces to ensure that early care and education establishments operate effectively from both a business and an educational standpoint. Stronger referral relationships, combined educational materials, and jointly conducted training workshops would represent solid steps toward a powerful new partnership.
- **Different segments of the education and child services sectors.** Educational and social service agencies — from preschools and charter schools to community centers and adult care facilities — face many of the same business challenges. These groups can increase their market power and political influence by working together to address common concerns. For instance, the ECE industry may lack sufficient scale to justify a loan fund for childcare facilities, but combined with charter schools, after school providers and other youth programs, market demand may be sufficient to command a dedicated pool of capital. Similarly, achieving economies of scale in purchasing, health insurance, and administrative functions may be easier with a cooperative that includes different educational and social service providers, rather than early care and education providers alone. In addition to creating business benefits, these partnerships can also create programmatic synergies, as when early care and education centers partner with adult care facilities.

Seagull Schools in Kapolei combines a preschool and an adult day care center with impressive results. Preschoolers are better behaved and ready to learn due to the presence of kupuna and seniors are more active and engaged with children around. The combination also creates economies of scale with shared accounting, kitchen, maintenance and administration.

CONCLUSION: MAXIMIZING SOCIAL & ECONOMIC RETURN

Early care and education is part of the infrastructure for achieving good jobs in vibrant communities. In the same way that local government and the private sector collaborate to increase the availability of affordable housing and quality transportation systems to attract a skilled workforce, they benefit from investing together in the early care and education infrastructure. Investments in quality programs, particularly for children of low income, have a high public return, and save on government spending over the long-term. Investing in quality early care and education benefits all stakeholders:

- Taxpayers benefit when costs for criminal justice, remedial education, and welfare decline as a result of high-quality early care and education
- Businesses benefit when quality, affordable early care and education options attract new skilled workers to the area, support their employees to do their best work, reduce absenteeism and turnover, and prepare children for skilled employment in the future

- Communities benefit when parents have access to safe, quality early care and education to ready children for K-12 education and/or to enable parents to work outside the home
- Children benefit because they are better prepared to succeed in kindergarten, achieve later academic success, and eventually, to be productive and successful as adults.

These benefits are only maximized when all children have access to high quality early education. In addition to the specific recommendations above, government, business and other stakeholders must work together on the larger goal of making quality, affordable early care and education accessible to all Hawai'i families. Ultimately, this will require increased investment from all those who benefit from early care and education – the businesses which rely on a skilled workforce, the consumers who benefit directly from services, and the government development agencies that plan and fund economic development. When the broader objectives of quality and access are achieved Hawai'i will reap the full economic benefit of its early care and education system.

APPENDIX A:

Methodology FOR Calculating Gross Receipts and Direct Employment

DEFINING THE ECE INDUSTRY

The formal ECE industry in Hawaii is defined for this report as programs that provide care and education for children between the ages of birth and age 12. This includes approximately 50 after-school programs that provide services for children up to age 15, and:

- Licensed child care centers
- Family child care homes and group homes
- License-exempt programs that serve DHS-subsidized children
- ALU LIKE Native Hawaiian programs
- Kamehameha private trust preschools
- State-funded pre-k program, Preschool Open Doors
- Hawai'i Department of Education After-school Plus (A+) programs
- Head Start and Early Head Start programs
- Programs for children in military families

It does not include:

- License-exempt care that is not publicly subsidized

CALCULATING GROSS RECEIPTS

The economic contribution of the ECE industry is significantly undercounted in traditional economic accounting tools and alternate methodologies for collecting data are necessary. This report integrates comprehensive statewide information collected by early care and education infrastructure agencies, such as the Department of Human Services, the Department of Education, PATCH, and Good Beginnings Alliance.

The estimates of gross receipts and direct employment represent a “snapshot” of the industry taken at a particular time. It is important to note that the estimates only capture the formal early care and education sector; because enrollment and costs are difficult to measure for the informal education and care sector. Adding informal, unlicensed care would increase gross receipts and direct employment figures. The methodology also assumes that school-age children receive the same care during summer months as during the school year. While many children are probably in care and education programs significantly more hours during the summer, it is difficult to get information about the number of hours and the cost, so school-year activity was used for the full year.

LICENSED CENTERS, FAMILY CHILD CARE HOMES, AND GROUP HOMES

The methodology for calculating gross receipts for private centers, family child care homes, and group homes relies on comprehensive, timely data about current use of early care and education establishments maintained by PATCH, Hawaii's child care resource and referral agency. PATCH maintains a database of active licensed early care and education programs' capacity, enrollment, and market rate information. Enrollment includes children from families who pay their entire tuition themselves, those who are partially or fully subsidized by another private source (e.g., an employer or a philanthropic organization), and those who are subsidized by DHS. For centers, enrollment is broken down by age group (infant/toddler, pre-school, school-age) and for family child care homes, enrollment information is broken down into individual family child care homes and group homes. To accurately reflect differences throughout the state, analyses for this report were broken down into regions (Oahu, Maui, Molokai, Lanai, Kauai, East Hawaii, and West Hawaii). Enrollment in public programs was subtracted to get enrollment in private programs (even if tuition was partially supported with public funds through the Department of Human Services). Private program enrollment numbers are in Table A.1.

**Table A.1
Enrollment in Private Programs by Region¹³⁶**

| <i>Region</i> | <i>Licensed Center-based Care*</i> | | | <i>Family Child Care Homes</i> | |
|---------------|---|-----------------------------------|--------------------|----------------------------------|---------------------------------|
| | <i>Before/After School Programs</i> | <i>Infant/Toddler Centers</i> | <i>Pre-schools</i> | <i>Licensed Family Homes</i> | <i>Licensed Group Homes</i> |
| State Total | 5,465 | 841 | 11,753 | 1,853 | 60 |
| O'ahu | 4,240 | 666 | 8,354 | 1,045 | 20 |
| Maui | 330 | 77 | 1,201 | 297 | 11 |
| Moloka'i | 0 | 0 | 27 | 12 | 0 |
| Lana'i | 0 | 0 | 28 | 5 | 0 |
| Kaua'i | 12 | 0 | 538 | 145 | 7 |
| East Hawai'i | 330 | 52 | 958 | 193 | 10 |
| West Hawai'i | 553 | 46 | 647 | 156 | 12 |

* Does not include A+ enrollment, DHS military, Kamehameha pre-schools, Head Start, or Special Education pre-school enrollment. Note that some private programs may accept public funds for services to income-eligible children (child care assistance).

¹³⁶ PATCH data for Third Quarter 2003-2004, provided August 23, 2004.

Gross receipts estimates for the amount that parents paid to family early care and education homes and early care and education centers are based on this calculation:

$$\text{Gross Receipts} = \text{Enrollment} \times \text{Cost/Child/Year}$$

Cost information was obtained from the state's child care resource and referral agency, PATCH, and is presented in Table A.2.

| <i>Region</i> | <i>Licensed Center-based Care*</i> | | | <i>Family Child Care Homes</i> | |
|---------------|------------------------------------|------------------------------|-------------------|--------------------------------|----------------------------|
| | <i>Before/After School Program</i> | <i>Infant/Toddler Center</i> | <i>Pre-school</i> | <i>Licensed Family Home</i> | <i>Licensed Group Home</i> |
| O'ahu | \$2,131 | \$9,169 | \$6,389 | \$5,869 | \$5,869 |
| Maui | \$1,928 | \$8,154 | \$5,622 | \$5,498 | \$5,498 |
| Moloka'i | \$1,928 | \$8,160 | \$5,616 | \$4,821 | \$4,821 |
| Lana'i | \$1,928 | \$8,160 | \$5,616 | \$5,283 | \$5,283 |
| Kaua'i | \$1,410 | N/A | \$4,730 | \$5,362 | \$5,362 |
| East Hawai'i | \$780 | \$4,860 | \$4,573 | \$4,740 | \$4,740 |
| West Hawai'i | \$888 | \$6,568 | \$5,872 | \$5,407 | \$5,407 |

* Does not include A+ enrollment, DHS military, Kamehameha pre-schools, Head Start, or Special Education pre-school enrollment

PUBLIC EARLY EDUCATION PROGRAMS

Gross receipts for Special Education Pre-school, Kamehameha Schools, Head Start, DHS license-exempt subsidies, and DHS subsidies to military families were determined by budget information for State Fiscal Year 2003-04 (SFY '04). The values for these programs is in Table A.3.

| <i>Program</i> | <i>Annual Gross Receipts</i> |
|--|------------------------------|
| Special Education Pre-schools | \$24,035,172 |
| Head Start | \$23,799,802 |
| License-exempt Programs Subsidized by DHS* | \$20,388,036 |
| Kamehameha Pre-schools | \$13,880,016 |

* License-exempt providers are not public early care and education programs, but are included in this table because only their public funds are included in this report.

AFTER-SCHOOL PLUS (A+) PROGRAM

The total cost for the A+ Program is \$70 per month. For families who meet income and other eligibility requirements, some or all of this cost may be covered through public funds, while other families may pay the full cost themselves directly to their provider. The total gross receipts for the A+ program were derived from the enrollment (22,496) multiplied by the total cost per year, regardless of the source of the funding (\$840 per year). The total gross receipts for A+ were \$18.9 million.

¹³⁷ Data from PATCH, provided November 10, 2004.

¹³⁸ Data from the Department of Human Services, the Department of Education, and Kathie Reinhart.

MILITARY PROGRAMS

The total cost for military child care centers and family child care homes was taken from a study of the cost of military child development programs and updated to 2004 using the Consumer Price Index (CPI).¹³⁹ Enrollment was estimated using the number of children in military families who enroll in kindergarten in Hawaii's public schools and applying early care and education enrollment rates generously supplied by the Army. The total gross receipts for the military were \$37.9 million.

TOTAL GROSS RECEIPTS

The total gross receipts value for the ECE industry is in Table A.4.

| <i>Type of Program</i> | <i>Gross Receipts</i> |
|--|-----------------------|
| Licensed child care centers | \$159.1 |
| Civilian private | \$91.3 |
| Military | \$30.1 |
| Head Start | \$23.8 |
| Kamehameha preschools | \$13.9 |
| License-exempt providers (DHS subsidized only) | \$20.4 |
| Special Education preschools | \$24.0 |
| Licensed family child care homes | \$18.5 |
| Civilian private | \$10.7 |
| Military | \$7.8 |
| A+ Afterschool | \$18.9 |
| Total | \$240.9 |

DIRECT EMPLOYMENT

A recent survey of Hawaii's early care and education workforce in centers found that there was one employee for every 4.64 children.¹⁴¹ This value was applied to enrollment for infants and toddlers in licensed centers, Kamehameha pre-schools, and Head Start centers. For private after-school programs, the minimum licensing staff-to-child ratio of one adult to 20 children was used to estimate the number of teaching staff in before- and after-school programs. Family child care homes were each assumed to have one worker, and each family group home was assumed to have two workers. Special education pre-school employment was provided by the Hawaii Department of Education. Employment in A+ programs was derived from staff-to-child ratios in A+ Programs at Kama'aina Kids, which serves more than one-quarter of A+ enrollees. Kama'aina Kids has one employee for every 11.64 children in A+. Employment in military programs is based on minimum staff-to-child ratios required by the National Association for the Education for Young Children (one staff person for every four infants, one staff person for every five pre-schoolers). License-exempt providers were not included, because although they clearly work hard educating and nurturing young children, the reimbursements they receive are not viewed as wages or income.

¹³⁹ G. L. Zellman and S. M. Gates. *Examining the Cost of Military Child Care*. Santa Monica, CA: RAND Corporation, 2002.

¹⁴⁰ Data from analyses by the National Economic Development and Law Center.

¹⁴¹ Good Beginnings Alliance. *Who Cares for Hawaii's Keiki in Centers? The Hawaii Early Childhood Workforce Study*. Honolulu: Good Beginnings Alliance, 2004. Also private communication with the project leader Teresa Vast, January 5, 2005.

APPENDIX B:

Multiplier Effects OF THE ECE Industry

Every industry, including early care and education, is linked to the rest of the local economy through a number of avenues, reflecting the fact that establishments purchase supplies from other Hawai'i-based businesses and the industry's employees spend their earnings in part on locally produced goods and services. The linkages of the ECE industry in Hawai'i can be measured using an input-output model and its associated multipliers, a methodology used by some economic development specialists. While the multiplier methodology is not without controversy, these estimates illustrate that early care and education is an important integrated component of Hawai'i's economy, both through its direct employment and output, and through its economic linkages.

These estimates for the impact of early care and education on indirect and induced earnings and other productivity effects are based on the application of the 2001 Hawai'i module of the IMPLAN Input-Output (I-O) model. Initially developed for use by the U.S. Forest Service, IMPLAN is now used in many fields. It relies on the same basic model structure and underlying economic data as the U.S. Department of Commerce Bureau of Economic Analysis Regional Impact Modeling System (RIMS).

I-O models use area-specific data on industrial and commercial activity to trace the linkages between industries. IMPLAN is based on a table of direct requirement coefficients which indicate the inputs of goods and services from various industries required to produce a dollar's worth of output in another, single industry. Standard economic "production functions"—the capital, labor and technology needed to produce a given set of goods—determine how changes in one industry's demand ultimately affect the demand for the inputs to that industry. For example, producing a ton of steel may require three workers and a particular set of equipment, which would not be required if the steel were no longer needed. Likewise, child care programs must purchase educational materials, facilities and professional staff services.

IMPLAN contains more than five hundred economic sectors, and uses economic census data to compile regional economic information. National data are adjusted for the industrial and trading patterns for the subject region. Based on this structure, IMPLAN estimates the regional economic impact that would result from a dollar change in demand of a particular industry.

The multiplier effect estimates the links between an industry and other areas of the economy. For this analysis, Type I multipliers are used. Type I multipliers represent the entire response (direct and indirect) per million dollars of final demand, and exclude government and households spending. The two components of Type I multipliers are:

- Direct effects: Effects introduced into the state's economy as a result of spending on early care and education. Multipliers represent the response (e.g. change in employment) for a given industry per million dollars of final demand for that same industry.
- Indirect effects: Effects reflecting spending by the ECE industry. The multiplier represents the response by all local industries caused by the iteration of industries purchasing from industries per million dollars of final demand for a given industry.

For Hawai'i, the components and total Type I multipliers for the "child care industry" are reported in Table B.1.

| | <i>Direct</i> | <i>Indirect</i> | <i>Total Type I</i> |
|-------------------------|---------------|-----------------|---------------------|
| Output | 1.00 | .291 | 1.29 |
| Value-Added | .581 | .164 | 1.28 |
| Employment | 23.53 | 3.16 | 1.13 |
| Indirect Business Taxes | .010 | .017 | 2.64 |
| Labor Income | .401 | .096 | 1.24 |

These multipliers indicate that \$240.9 million in gross receipts for the ECE industry correspond to an additional \$70.0 million in indirect revenue to other industries supported by the ECE industry for a total economic impact of \$310.7 million. This includes spending in real estate (\$11.8 million), wholesale trade (\$5.9 million), food services (\$3.6 million), and maintenance and repair (\$3.4 million). Employment of 9,375 corresponds to an additional 1,259 jobs in other industries that are supported by the current ECE industry for a total of 10,634 jobs. The leading industries affected are food services and drinking places (147 jobs); real estate (120 jobs); and wholesale trade (99 jobs).

The Department of Business, Economic Development, and Tourism completed its own multiplier analysis because traditional models to calculate multipliers are not accurate for such a distinct economic region such as Hawai'i. The 1992 Input-Output model found Type I multipliers for "child day care services" as 1.11 for output, 1.02 for Employment, and 1.05 for labor income (see Table B.2).¹⁴²

| | <i>Total Type I</i> |
|--------------|---------------------|
| Output | 1.11 |
| Employment | 1.02 |
| Labor Income | 1.05 |

Analyses using these multipliers indicates that \$240.9 million in gross receipts corresponds to a total economic impact of \$267 million and 9,375 jobs corresponds to a total impact in employment of 9,562.

¹⁴² Supplied by Khem Sharma, Department of Business, Economic Development, and Tourism, January 10, 2005.

