



Investing in Oregon Head Start Pre-kindergarten Saves Money

A Report from FIGHT CRIME: INVEST IN KIDS OREGON

ACKNOWLEDGEMENTS

FIGHT CRIME: INVEST IN KIDS OREGON is part of FIGHT CRIME: INVEST IN KIDS, a national, bipartisan, nonprofit, anti-crime organization. The national organization has a membership of more than 3,000 police chiefs, sheriffs, prosecutors, other law enforcement leaders and violence survivors. The members take a hard-nosed look at what works -- and what doesn't work -- to prevent crime and violence. They then recommend effective strategies to state and national policy-makers.

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Executive Summary

The law enforcement leaders of FIGHT CRIME: INVEST IN KIDS know that providing quality pre-kindergarten programs like Head Start is one of the best ways to keep kids on the right track in life and prevent crime. Head Start, the nation's premier federal early education program for 3- and 4-year-olds, has given millions of America's low-income children the opportunity to succeed in school and later in life. Research shows that Head Start has narrowed the educational achievement gap between low- and upper-income kids, increased high school graduation rates and reduced crime.

In addition to the crime prevention and educational benefits, pre-kindergarten programs have dramatic economic benefits. Law enforcement, business, and civic leaders recognize that investing in quality pre-kindergarten programs such as Head Start promotes economic development by preparing a skilled workforce. That is why the business community and leading economists are focusing on high-quality early education as a sound investment that will strengthen the economy. Investing in high-quality Head Start helps at-risk kids and it makes good business sense.

When the nation invests in Head Start, children's success literally pays back the costs of the program, through increased economic productivity of and decreased human services expenses for the Head Start graduates. Providing high-quality Head Start services to the estimated 6,400 eligible children not being served per year in Oregon could return as much as \$10 for every dollar spent. This is an estimated \$500 million in benefits per year to taxpayers, program participants, and crime victims in Oregon. An estimated \$300 million of these benefits would go to the public in reduced government spending for services like remedial education or juvenile detention, and increased tax revenue because there will be more better-paid workers.

The public benefit generated by providing high-quality Head Start to the 6,400 eligible children per year currently not served translates into an estimated tax savings of approximately \$200 per Oregon taxpaying household.

That is why the 137 police chiefs, sheriffs, district attorneys, and violence survivors who are members of FIGHT CRIME: INVEST IN KIDS OREGON, and the more than 3,000 members nationally, are committed to the increased investments needed to provide Head Start to all eligible children in Oregon and make Head Start even stronger by raising teacher qualifications. America should invest more in Head Start to save taxpayers' money, save lives, and make us all safer.

Investing in Oregon Head Start Pre-kindergarten Saves Money

INTRODUCTION

The police chiefs, sheriffs, district attorneys, and other law enforcement leaders who are members of FIGHT CRIME: INVEST IN KIDS are determined to put dangerous criminals behind bars. They know that locking up criminals is not enough to win the fight against crime. Law enforcement leaders recognize that among the most powerful weapons to prevent crime and violence are quality pre-kindergarten programs, like Head Start, that help kids get the right start in life

In this report, we will first describe the Head Start program both nationally and as it is delivered in Oregon through Oregon Head Start Prekindergarten. Next, we will review the research showing the economic development benefits of early education programs like Head Start. Third, we will describe how Oregon can actually save money in the long run by providing quality Head Start services to eligible children. Fourth, we will illustrate how these cost savings are returned to Oregon, and provide an estimate of the financial benefits Oregon could accrue with high-quality Head Start. Finally, we call for increased investments in Oregon Head Start to enable Oregonians to realize these financial benefits while helping at-risk children.

HEAD START IN OREGON

Head Start is the federally-funded national prekindergarten program for low-income

families that provides early education services for children ages three to five. Children in Head Start receive a comprehensive range of services: preschool education, child health, nutrition, social and emotional development, parent education, and family involvement. Head Start equips children with the necessary tools and services to enter kindergarten better prepared, helping them to avoid falling behind other students and starting down a path leading too often to juvenile delinquency and future crime. Over 40 years, Head Start has given a literal “head start” to more than 20 million of the country’s most needy children, helping them to become responsible, productive adults.

In Oregon, Head Start services are provided through Oregon Head Start Prekindergarten. Operating since 1988, Oregon Head Start Prekindergarten combines state and federal Head Start funding into one seamless program, and meets the same rigorous federal Head Start Performance Standards that help ensure quality services for children and families nationally. From 2003 to 2005, Oregon invested \$54 million for Head Start in addition to the federal Head Start program funds of \$99 million for a total of \$153 million for Head Start’s needy children in Oregon.¹

Oregon Head Start uses the federal eligibility requirements, requiring 90 percent of children served to have family incomes at or below the

federal poverty guidelines (for example \$16,090 for a family of three).² Oregon modifies this requirement slightly for state-funded Head Start children, allowing as many as 20 percent of children enrolled to have family incomes above the federal poverty guidelines. In addition to income, local programs use locally developed priority rating systems that include other family risk factors beyond income level (such as referrals from pediatricians, referrals for parent alcohol and drug addiction, and child abuse and neglect) to determine enrollment priorities among eligible children.

Oregon also provides Early Head Start (EHS), a proven program that extends the benefits of Head Start to children under three. Early Head Start was created in response to research suggesting the importance of the first three years in a child's life. Established in 1994, EHS serves both pregnant women and children ages birth to 3, providing guidance, information, parenting support, and direct services. Families are served by centers and/or home visits. Mathematica Policy Research and Columbia University conducted a national evaluation of EHS. Families randomly assigned to receive the combined center/home visit approach were 62 percent more likely to read to their children daily than families that did not receive the program. Children left out of these EHS programs were 34 percent more likely to score in the low range on a test of cognitive, social, and emotional development than those enrolled in EHS.³

Children and Families Served by Oregon Head Start

Between 2003 and 2005, *Oregon Head Start Prekindergarten* served 19,094 children in 658 classrooms in all 36 counties.

- The program serves children from a variety of racial and ethnic backgrounds, reflecting state demographic characteristics. In the 2003-2004 school year, 48 percent of enrolled children were white, 31 percent were Latino, seven percent

were African-American, seven percent were biracial or multiracial, two percent were American Indian or Alaska Native, and two percent were Asian.⁴

- Seventy-one percent of children in Oregon Head Start speak English as their dominant language, 26 percent speak Spanish, two percent speak Asian languages, and one percent speak other languages as their dominant language.⁵
- About three-fourths (74 percent) of Oregon Head Start parents are employed full-time or part-time, and another 15 percent participate in job training programs or attend school.⁶

Like Head Start programs around the country, Oregon Head Start specializes in serving children with disabilities. Federal and state program rules require that at least 10 percent of the total enrollment be reserved for children with disabilities. Oregon exceeds this requirement and dedicates approximately 16 percent of its enrollment to children with disabilities.⁷

The federally funded Tribal Head Start program serves American Indian children. There are nine recognized tribes in Oregon, five of which have federal Head Start funding and provide services to 304 children. Additionally, the Grande Ronde Tribe allocates its tribal funds to serve an additional 27 children.⁸

Head Start Cuts Crime and Helps Kids Learn

Research proves that Head Start and other high-quality pre-kindergarten programs help cut crime and prepare children for school success. By providing quality preschool education and comprehensive services, Head Start helps kids succeed and avoid lives of crime.

Quality pre-kindergarten programs like Head Start help kids stay on track and avoid future

lives of crime. Research shows that adults who attended Head Start as children were less likely to commit crimes than adults from similar backgrounds who did not attend Head Start. A large national survey of Head Start graduates found that graduates were 8.5 percent less likely to be later arrested or charged with a crime than their siblings who attended other preschool programs.⁹

Other high-quality pre-kindergarten programs have also provided strong evidence of dramatic reductions in crime. Chicago's federally funded Child-Parent Centers have served 100,000 3- and 4-year-olds from low-income neighborhoods since 1967. Research shows that similar at-risk children left out of the program were 70 percent more likely to have been arrested for a violent crime by age 18 than those who attended the program.¹⁰ Michigan's High/Scope Perry Preschool program served 3- and 4-year-old children from low-income families. Children randomly assigned to a control group were five times more likely to have become chronic lawbreakers by age 27 than those assigned to attend the program.¹¹

Research also shows that Head Start has positive effects on children's school readiness, helping to level the playing field by preventing disadvantaged children from lagging behind more advantaged children in kindergarten. Head Start narrowed the school readiness gap between children from low-income homes who attended Head Start and children from higher-income homes. A study with a nationally representative sample of 2,800 children showed that Head Start significantly raised average scores of children's performance.¹² Moreover, the largest gains were made by the lower-performing children, especially in the areas of vocabulary and early writing. Head Start kids doubled their vocabulary test scores by the end of kindergarten. A separate national impact study utilized the best design possible—a randomized control trial—and found that Head Start cut the achievement

gap nearly in half for pre-reading skills between Head Start children and the national average for all 3- and 4-year olds.¹³

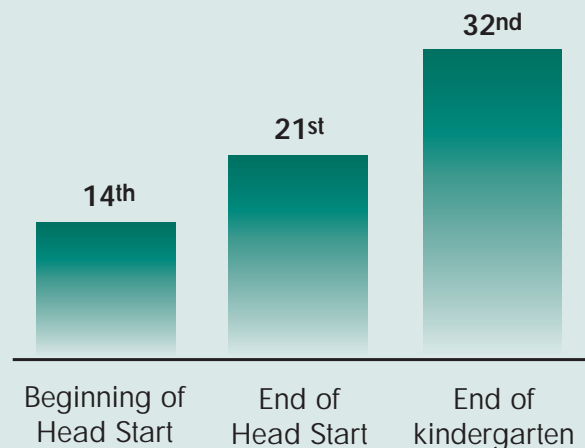
Lack of Funds Deny Head Start to 6,400 Eligible Children in Oregon

While Oregon Head Start provides critical services for thousands of Oregon's low-income preschoolers and their families, only 60 percent of eligible children in Oregon participate in the program due to lack of funding. During the 2004 to 2005 school year, approximately 9,600 of Oregon's children were served by Head Start programs.¹⁴ Of the estimated 16,000 children eligible for Head Start, 6,400 children—or 40 percent—did not receive the program in the 2004-2005 school year due to lack of funding.¹⁵

State agency officials report that local Head Start programs are at full capacity, and programs have waiting lists in all but one of the communities served. For example, in eastern Multnomah County, the Mt. Hood Community College Head Start Prekindergarten program has over 1100 eligible children on the waiting list to receive Head

Head Start Narrows the Gap between Its Youngsters and Other American Children

Percentile ranking for vocabulary scores of Head Start children*



*A 14th percentile rank means that Head Start children scored above 14% of American children (of the same age).

Start.¹⁶ According to Oregon state government agency officials, there is a demand for additional Head Start services. If Oregon had additional federal Head Start or state pre-kindergarten funds, Oregon Head Start could serve more children.

ECONOMIC DEVELOPMENT THROUGH EARLY EDUCATION

In addition to cutting crime and helping kids learn, quality pre-kindergarten programs like Head Start also help Oregon's economy. Oregon Head Start promotes the state's long-term economic growth by preparing at-risk kids to succeed in school, graduate from high school, and become economically productive members of society. Better preparing children to be skilled workers will enable Oregon to be more economically competitive nationally and internationally.

With an increasingly global economy, the skill level of U.S. workers has become more important to maintaining our economic competitiveness. Global competition in trade has led many companies to move less-skilled work to other nations with lower wages.¹⁷ Computer automation has also eliminated many routine manual labor jobs once performed by factory workers. U.S. workplaces have remained competitive by creating new knowledge-intensive jobs.¹⁸ Increasingly, U.S. jobs require higher levels of skills and education than in the past. Yet the quality of our labor force has stagnated in recent decades, and over 20 percent of U.S. workers are functionally illiterate and innumerate.¹⁹ This lack of skilled workers constrains U.S. economic competitiveness.

Nobel Prize winning economist James Heckman of the University of Chicago makes the argument for investing in young children's education because of its economic benefits. According to Heckman, "On productivity grounds alone, it appears to make sound business sense to invest in young children from disadvantaged environments. An accumulating

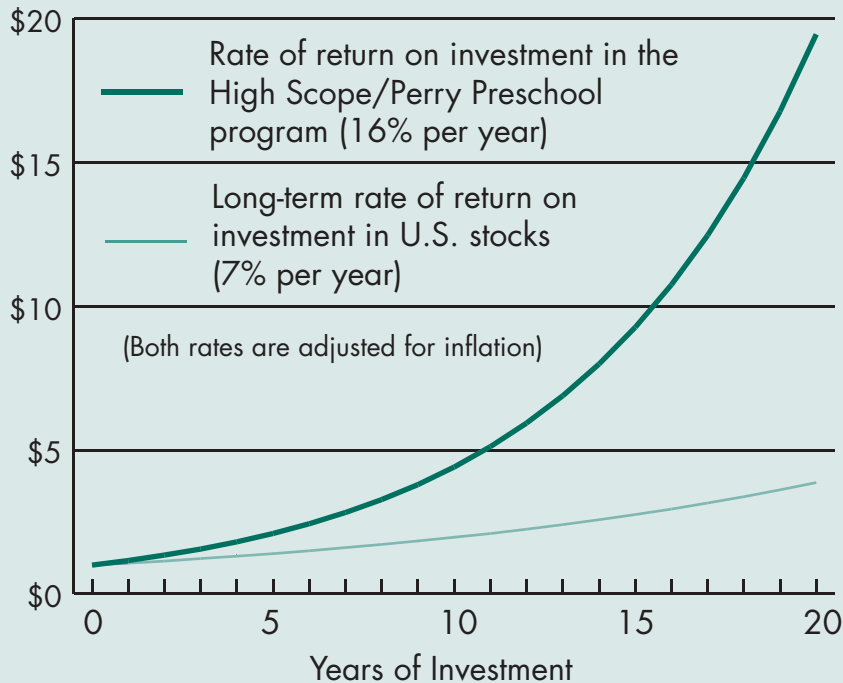
body of evidence suggests that early childhood interventions are much more effective than remedies that attempt to compensate later in life for early neglect."²⁰ The gaps in ability between disadvantaged children and their more-advantaged peers begin early in life. As Heckman has noted, "Learning begets learning and skill begets skill. Early advantages accumulate, so do early disadvantages."²¹

Other leading economists agree that funding high quality pre-kindergarten is among the best investments government can make. An analysis by Arthur Rolnick, senior vice president and director of research at the Federal Reserve Bank of Minneapolis, showed that the return on the investment of the Perry Preschool Program, a model early education program for at-risk children, was 16 percent after adjusting for inflation. Seventy-five percent of that return went to the public in the form of decreased special education expenditures, crime costs, and welfare payments. To put this in perspective, the long-term average return on U.S. stocks is seven percent after adjusting for inflation. Thus, an initial investment of \$1,000 in a program like the Perry Preschool is likely to return more than \$19,000 in 20 years, while the same initial investment in the stock market is likely to return less than \$4,000.²² As William Gale and Isabel Sawhill of the Brookings Institution assert: investing in early childhood education provides government and society "with estimated rates of return that would make a venture capitalist envious."²³

Business leaders nationwide also recognize the benefits of investing in quality early education like Head Start. A 2005 poll of U.S. business leaders commissioned by the Committee for Economic Development found that "more than 80 percent of business leaders agree that investments in effective preschool programs would help the United States remain globally competitive, and improve its long-term economic outlook and the quality of its workforce."²⁴

Pre-Kindergarten is an Excellent Investment

A \$1,000 investment in quality pre-kindergarten returns over \$19,000 in 20 years, while a stock market investment returns less than \$4,000.



Federal Reserve Bank of Minneapolis

distressed areas.²⁸ Oregon's 2005 unemployment rate of 6.1 percent, while having decreased since 2003, still is notably higher than the unemployment rate in California (5.4 percent), Washington state (5.5 percent) or the national average (5.1 percent).²⁹

Helping children succeed in school is also important to the economic health of the state. In Oregon, 85 percent of the state's adults have a high school degree, which is ahead of the national average (80.4 percent).³⁰ In educational attainment, Oregon has a solid foundation but can still do better. The average personal annual income in Oregon in 2004 was \$30,561, which is slightly lower than the United States average of

Oregon's Economy

Given the economic development benefits of high-quality early education, programs like Head Start are a smart long-term investment to bolster Oregon's struggling economy. Oregon's economy has not fully rebounded from the recession of 2001.²⁵ In the last several decades, Oregon's economy has been moving away from the traditional resource sectors of timber, fishing, and agriculture toward a more mixed economy with a focus on high technology. The growth of the technology sector has been concentrated in more urban areas, particularly around Portland. Rural areas of the state generally have not benefited from technology sector growth.²⁶

In fact, Oregon's Economic and Community Development Department reports that 16 counties in the state, all rural, have been classified as severely economically distressed.²⁷ Three out of four Oregon counties in 2005 were classified as distressed or severely

\$33,041.³¹ As in the country as a whole, increased educational attainment levels can improve income levels for Oregonians. Examining county-level data in the accompanying chart illustrates this point. Counties in Oregon with some of the highest educational attainment levels have higher incomes and lower child poverty rates. And among economically distressed counties such as Lake and Malheur, lower levels of educational attainment are associated with lower incomes and higher rates of child poverty.

The link between education and economic growth is clear. Because the experience of high quality early education leads to success in school and higher graduation rates, pre-kindergarten programs like Head Start secure this education-economic growth link, giving children the tools to achieve success in school and in life.

HEAD START SAVES MONEY FOR OREGONIANS

Every year, Head Start helps thousands of Oregon's needy children get ready for school and avoid lives of crime. But beyond helping needy children, Head Start's benefits accrue to Oregon's citizens statewide.

A series of rigorous longitudinal studies have documented the tremendous positive impact that high-quality pre-kindergarten programs have on children starting in the preschool years and continuing into adulthood. By improving children's educational performance and earnings, Head Start and other pre-kindergarten programs generate many benefits to society.

Benefits Per Dollar Invested

The business community has long used economic analyses in a variety of industries to assess the benefits of new investments; in other words, what is the bottom-line return on an investment? These same tools used by the business sector have also been applied to pre-kindergarten programs. One common type of analysis is called a benefit-cost analysis.³² The purpose of a benefit-cost analysis is to determine the financial benefits of the

investment relative to its financial costs.

Benefit-cost analyses have been performed by economists on early education programs for at-risk children. These rigorous analyses monetize the various benefits of programs – that is, state the benefit in terms of its financial value. Using benefit-cost analysis procedures, researchers have calculated the benefit that quality preschool programs for low-income children provide in terms of a financial return on investment. This return on investment is commonly described in these terms: for every dollar invested, some number of dollars are returned through reduced costs and increased benefits to program participants, taxpayers, and crime victims.

While no benefit-cost analyses have been conducted for Head Start, analyses for other comparable programs for low-income preschoolers have been performed. Some of these programs are small-scale model programs, like the High/Scope Perry Preschool program, and some are large-scale, like the Chicago Child-Parent Centers. These results yield a range of benefit-cost ratios, with the benefits ranging from two dollars to 17 dollars for every dollar spent.³³

Economic and Educational Measures in Oregon Counties

	Percent of individuals over 25 with high school degree or more	Average per capita personal income	Children in poverty
	2000	2004	2003
Oregon (ave.)	85.1%	\$30,561	17.4%
Benton County	93.1%	\$33,988	12.2%
Clackamas County	88.9%	\$37,094	11.9%
Washington County	88.9%	\$33,347	11.4%
Lake County	79.6%	\$24,271	23.7%
Malheur County	71%	\$20,222	25.3%

U.S. Census Bureau, Oregon, State and County Quick Facts: 2000
 Bureau of Economic Analysis, Table CA1-3 – Oregon Per capita personal income (dollars)
 U.S. Census Bureau, Estimates for Oregon counties, 2003, Age 0-17 in poverty, 2003

A good estimate of the current Head Start program's likely benefit for every dollar invested comes from a meta-analysis by Steve Aos and colleagues at the Washington State Institute for Public Policy. In this meta-analysis, Washington state researchers developed a benefit-cost estimate of \$2.36 per dollar spent for early education programs for low-income 3- and 4-year-olds. This analysis was based on 53 studies of small-scale and large-scale preschool programs for low-income children (including Head Start).

However, FIGHT CRIME: INVEST IN KIDS estimates that an improved, even higher-quality Head Start program could produce greater benefits for kids and society than \$2 for every dollar spent. While Head Start is a quality program that helps thousands of at-risk children in Oregon, some program improvements would improve the quality of this program even further, yielding greater benefits for kids and society. The key program improvement needed to raise the quality even higher is an increase in teacher qualifications, requiring lead teachers to have four-year degrees.³⁴ Additional quality improvements are enhancing curriculum standards, expanding parent coaching services, and expanding interventions for children with behavioral problems.³⁵

With these quality improvements, we can expect that Head Start will have a higher benefit-cost ratio. A higher-quality Head Start could achieve even higher rates of return on the public's investment, comparable to the Chicago Child-Parent Centers program benefit-cost estimate of \$10.15 for every dollar spent.³⁶

The Chicago Child-Parent Centers program is a large-scale early intervention that provides comprehensive educational and family-support services to economically disadvantaged children. The CPC program is the second-oldest federally funded preschool program in the U.S. and is among the highest quality early childhood

programs available.³⁷ For example, every CPC program lead teacher has a Bachelor's degree.

The Chicago CPC program is comparable in many ways to Head Start. Both are large-scale federally-funded early education programs serving low-income children, with Head Start being national in scope, and the CPC program having served over 100,000 children in the Chicago area over 30 years. The program costs of Head Start and CPC are also comparable; the national estimated cost per child to provide Head Start is \$7,287, quite similar to the \$7,384 average cost per child for the Child-Parent Centers program.³⁸ Even with an increase in Head Start per-child costs of an estimated seven percent to accommodate the major program quality improvement of increased teacher qualifications, the two programs' costs are still generally comparable.³⁹

How Oregon Would Realize Head Start's Economic Return

By providing high-quality Head Start to all eligible children in Oregon, FIGHT CRIME: INVEST IN KIDS estimates \$10 in benefits for every dollar spent. But what does this \$10 for every dollar spent mean? And how are these dollars returned to Oregonians? Here are the ways

Costs and Benefits of Chicago Child-Parent Center preschool program at age 24 (2002 dollars)

Average program cost per participant	\$7,384
Total benefits (to taxpayers, crime victims, and program participants)	\$74,981
Net benefits (benefits minus costs)	\$67,595
Total benefit per dollar invested	\$10.15
Total benefit to public per dollar invested	\$6.87

Reynolds & Temple, 2006

that our investment in high-quality pre-kindergarten programs like Head Start is returned to society to benefit all Oregonians. The following results are based on the benefit-cost analysis of the CPC program conducted when participants were age 21.⁴⁰

Reduced public school expenses: When children do better in school, schools save money by reduced need for special education services and reduced rates of children being held back a grade. A benefit-cost analysis of the CPC program at participant age 21 found that this pre-kindergarten program yielded a savings of \$4,872 per participant in reduced education expenses.⁴² This educational savings was due to lower rates of grade retention and lower use of special education services.

Increased earnings and paying taxes: Children in high-quality pre-kindergarten like Head Start have higher rates of high school completion than similar children without pre-kindergarten programs. The age 21 benefit-cost analysis of the CPC program estimates \$20,517 in increased lifetime earnings for each pre-kindergarten participant over those without pre-kindergarten, and \$7,243 in taxes on those earnings being returned to the public.⁴² This savings is based on the difference in lifetime earnings for completing high school, and the increased tax revenue on those increased earnings.

Reduced criminal justice system expenses: Children who received high-quality pre-kindergarten were less likely to be arrested as juveniles than similar children without pre-kindergarten. The age 21 benefit-cost analysis of the CPC program estimates a savings in juvenile justice expenses (juvenile courts, detention facilities, or probation services) of \$4,518 per participant and savings in adult criminal justice expenses of \$2,612 per participant.⁴³

Reduced expenses for crime victims: Since children with high-quality pre-kindergarten

commit fewer crimes than similar children without high-quality pre-kindergarten, there are fewer victims who suffer the horrible effects of crime. Providing high-quality pre-kindergarten yielded a savings for victims of juvenile and adult crimes totaling \$6,127 per participant.⁴⁴ This savings is based solely on the tangible costs to crime victims and does not include pain and suffering, which would be a much higher cost.

Reduced child abuse and neglect expenses: Children in high-quality pre-kindergarten experienced lower rates of abuse and neglect than similar children without pre-kindergarten. In addition to avoiding the anguish of abuse and neglect, the financial savings from reduced child welfare system expenses (including court and foster care expenses) and reduced costs to victims of child abuse, total \$770 per pre-kindergarten program participant.

PROJECTING HEAD START'S TAX SAVINGS FOR OREGON

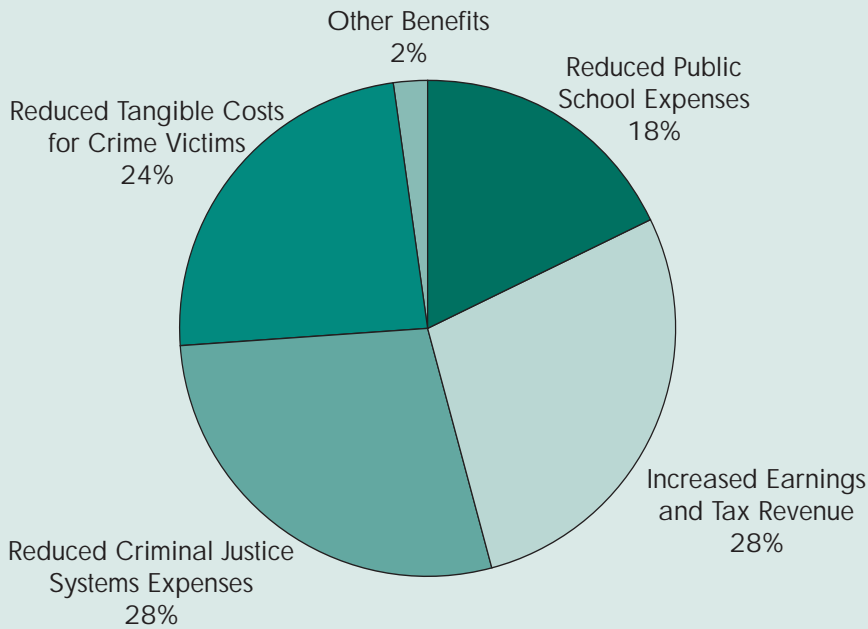
With improvements to Head Start program quality, including increases in the number of teachers with four-year degrees, along with curriculum standards enhancements, expansions of parent coaching, and the inclusion of expanded interventions for children with behavioral problems, Head Start could achieve substantial benefits for each dollar spent, similar to the Chicago CPC program.

Therefore, using the CPC benefit-cost figure of \$10.15 for every dollar spent as an estimate of an improved, even higher-quality Head Start, we can expect that providing high-quality Head Start to all eligible children not served in Oregon could yield a return on the program investment of as much as \$10.15 for every dollar spent.

As stated earlier, 40 percent of Oregon kids eligible for Head Start, or an estimated 6,400 children, are not receiving services due to lack of funds. The financial savings that providing

Crime Victims, the Public, and Program Participants all Gain Economic Benefits from Pre-Kindergarten Programs Like Head Start

Estimated distribution of benefits from the Chicago CPC program.



Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2002). Age 21 cost-benefit analysis of the Title I Chicago Child-Parent Centers. *Education Evaluation and Policy Analysis*, 24(4), 267-303.

returned sooner, such as reduced public education and child welfare spending, and some benefits returned over a generation and throughout the program participant's adult lives, such as the increased tax revenue on the increased lifetime earnings of Head Start participants.

Note that the \$300 million in estimated public benefits is generated by providing high-quality Head Start to one year's worth of eligible children not being served, an estimated 6,400 children. Providing Head Start to 6,400 eligible children per year not being served for 10 years would multiply the benefit ten-fold, yielding \$3 billion in public benefits to Oregon for 10 years worth of additional Head Start

Head Start to these eligible children would yield by the time these preschoolers reach young adulthood can be estimated.

If an improved, even higher-quality Head Start is provided to all eligible Oregon kids not being served for a year, FIGHT CRIME: INVEST IN KIDS estimates that over the long term an estimated \$500 million in benefits would be returned to taxpayers, program participants, and crime victims in Oregon.⁴⁵ An estimated \$300 million of these benefits would go to the public (which includes taxpayers and crime victims) in reduced government spending for services like remedial education or juvenile detention and increased tax revenue because there will be more better-paid workers.⁴⁶

The \$300 million in estimated public benefits would be realized over the Head Start program participants' lifetimes, with some benefits being

graduates.

The public benefit generated by providing an improved, high-quality Head Start to the 6,400 eligible children per year not currently served translates into a tax savings of approximately \$200 per Oregon taxpaying household.⁴⁷

CONCLUSION

The evidence is clear: high-quality pre-kindergarten programs like Head Start save money, cut crime, and help children learn. Providing high-quality Head Start services to the estimated 6,400 eligible children not being served per year in Oregon could yield as much as \$500 million in benefits per year to taxpayers, program participants, and crime victims in Oregon. An estimated \$300 million of these benefits would go to the public in reduced government spending for services like remedial education or juvenile detention and

increased tax revenue because there will be more better-paid workers. The value of these public benefits translate into approximately \$200 in tax savings for every Oregon taxpaying household.

In addition to the impressive tax savings, providing high-quality Head Start will strengthen Oregon's economy by helping children succeed and go on to become tomorrow's skilled workers, taxpayers, and productive citizens instead of tomorrow's criminals. Improving the quality of Oregon's workforce through high-quality pre-kindergarten is a smart long-term strategy to maintain Oregon's economic competitiveness. More than 80 percent of U.S. business leaders agree that investments in effective preschool programs would help the United States remain globally competitive and improve its long-term

economic outlook and the quality of its workforce.

That is why the Oregon District Attorneys Association, the Oregon State Sheriffs' Association, the Oregon Association of Chiefs of Police, the FBI National Academy Associates, Inc., Oregon Chapter, and the Western States Sheriffs' Association have all adopted resolutions that support providing all children with affordable access to high-quality early education programs. The members of FIGHT CRIME: INVEST IN KIDS OREGON are calling on Oregon's elected leaders to ensure that Head Start services are available to all eligible children and that program quality is enhanced by increasing Head Start teacher qualifications and providing increased compensation to retain highly-qualified teachers.

Endnotes

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- ¹⁶ Shelley Yoder, Family Partnerships Coordinator, Mt. Hood Community College Head Start/Early Head Start, personal communication, 7/7/06.
- ¹⁷ Committee for Economic Development. (2006). The Economic Promise of Investing in High Quality Preschool. Washington, DC: Committee for Economic Development.
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- ¹⁹ Heckman, J.J., Masterov, D.V. (2004). The productivity argument for investing in young children. Invest in Kids Working Group, Working Paper 5. Washington, DC: Committee for Economic Development.
- ²⁰ Heckman, J.J., Masterov, D.V. (2004). The productivity argument for investing in young children. Invest in Kids Working Group, Working Paper 5. Washington, DC: Committee for Economic Development.
- ²¹ Heckman, J.J., Masterov, D.V. (2004). The productivity argument for investing in young children. Invest in Kids Working Group, Working Paper 5. Washington, DC: Committee for Economic Development.
- ²² Rolnick, A., et al. (2003) calculated an investment return of 16 percent by estimating the time periods in which costs and benefits in constant dollars were paid or received by Perry participants and society. For the rate of return on High/Scope Perry Pre-kindergarten, see: Rolnick, A., & Grunewald, R. (2003). Early childhood development: Economic development with a high public return. Retrieved from the Federal Reserve Bank of Minneapolis Web site: <http://www.minneapolisfed.org/pubs/fedgaz/03-03/earlychild.cfm>. For the rate of return on the stock market, see: Farrell, C. (2002, November 22). The best investment: America's kids. Retrieved from the Business Week Web site: http://www.businessweek.com/bwdaily/dnflash/nov2002/nf20021122_0334.htm
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- ²⁴ Zogby, J., Bruce, J., Wittman, R., and Peck, C.W. (2005). American Business Leaders Views' on Publicly Funded Pre-Kindergarten and the Advantages to the Economy. Zogby International Poll commissioned by the Committee for Economic Development.
- ²⁵ Oregon Blue Book. (nd). Oregon's Economy. Retrieved October 23, 2006 from <http://bluebook.state.or.us/facts/economy/economy01.htm>
- ²⁶ Oregon Blue Book. (nd). Oregon's Economy. Retrieved October 23, 2006 from <http://bluebook.state.or.us/facts/economy/economy01.htm>
- ²⁷ A county's classification as a distressed county is based on its measure of economic distress on 8 indicators: unemployment rate, per capita personal income, average pay per worker, populations change, percent of the population receiving unemployment insurance benefits, industrial diversity, percent of families in poverty, and employment change. State of Oregon Economic and Community Development Department. (2006). Distressed Area Methodology. Retrieved October 23, 2006 from <http://www.econ.state.or.us/methodsb.htm>
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- ³⁰ Bauman, K.J. & Graf, N.L. (2003). Educational attainment: 2000. Washington, D.C.: U.S. Census Bureau. This is based on 2000 Census data of the percent of persons age 25 or older with high school degrees.
- ³¹ Bureau of Economic Analysis, U.S. Department of Commerce. (2005). Table SA1-3 - Per capita personal income. Retrieved February 1, 2006 from <http://www.bea.gov/bea/regional/spi/drill.cfm>
- ³² A benefit-cost analysis is sometimes termed a cost-benefit analysis.

³³ A meta-analysis of preschool education programs for low-income 3- and 4-year-olds by Steve Aos and colleagues found a \$2.36 benefit for every dollar invested; the Abecedarian program found a \$3.78 benefit for every dollar invested; the Chicago CPC program found a \$10.15 benefit for every dollar invested; and the High/Scope Perry Preschool program found a \$17 benefit for every dollar invested. Aos, S., Lieb, R., Mayfield, J., Miller, M., & Pennucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth. Olympia, WA: Washington State Institute for Public Policy.

Masse, L.N., & Barnett, W.S. (2002). A Benefit Cost Analysis of the Abecedarian Early Childhood Intervention. New Brunswick, NJ: National Institute for Early Education Research.

Schweinhart, L.J., Montie, J., Xiang, Z., Barnett, W.S., Belfield, C.R., & Nores, M. (2005). Lifetime Effects: The High/Scope Perry Preschool Study Through Age 40. Ypsilanti, MI: High/Scope Press/Reynolds, A.J., & Temple, J.A., (January 20, 2006). Prevention and cost-effectiveness in early intervention: A 20-year follow-up of a Child Parent cohort. McEvoy Lecture Series on Early Childhood and Public Policy, Humphrey Institute of Public Affairs, University of Minnesota.

³⁴ Research shows that the training and education level of teachers are essential for providing the high-quality early education to reduce later crime and help children succeed. Teacher qualifications, specifically their level of education, are key to early childhood program quality. A national study of early childhood teachers and programs (Whitebook, Howes, and Phillips, 1989) found that teachers with B.A. degrees were "more sensitive, less harsh and detached, and more appropriate...than were teachers with less formal education." This study also found that children with sensitive and responsive teachers had higher language scores and demonstrated a higher level of peer play compared to other children.

A comprehensive review by a panel of early childhood experts for the National Research Council found that "both formal education levels and recent, specialized training in child development have been found quite consistently to be associated with high-quality interactions and children's development in center-based, family day care and even in in-home sitter arrangements."

Whitebook, M., Howes, C., & Phillips, D. (1989). Who Cares? Child Care Teachers and the Quality of Care in America: Final Report, National Child Care Staffing Study. Oakland, CA: Child Care Employee Project.

National Research Council and Institute of Medicine. (2000). From Neurons to Neighborhoods: The Science of Early Childhood Development. J. P. Shonkoff and D.A. Phillips (Eds.) Washington, DC: National Academy Press.

³⁵ For example, to provide interventions for children at risk for later behavioral difficulties, some Head Start centers have used The Incredible Years program. The Incredible Years program trains parents, teachers, and family service workers to reinforce problem-solving skills and non-aggressive social skills in children. In Washington State, children in Head Start were randomly assigned to The Incredible Years group or to a control group. Among the children with conduct problems, 96 percent of those who participated in Head Start/Incredible Years showed a significant reduction in aggressive and oppositional behavior, compared to 55 percent of children in the control group.

Webster-Stratton, C., Reid, M. J., Hammond, M. (2001). Preventing conduct problems, promoting social competence: A parent and teacher training partnership in Head Start. *Journal of Consulting and Clinical Psychology*, 30(3), 283-302.

³⁶ Reynolds, A.J., & Temple, J.A., (January 20, 2006). Prevention and cost-effectiveness in early intervention: A 20-year follow-up of a Child Parent cohort. McEvoy Lecture Series on Early Childhood and Public Policy, Humphrey Institute of Public Affairs, University of Minnesota.

³⁷ Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest. *Journal of the American Medical Association*, 285(12), 2339-2380.

³⁸ The average per-child cost of the CPC program, reported here in 2002 dollars, is based on the average length of program attendance,

approximately 1.5 years, whereas the Head Start program cost figure is an annual figure. However, some Head Start children do attend the program for two years; the average length of Head Start program attendance is unknown.

United States Department of Health and Human Services. (2006). Head Start Program Fact Sheet – Fiscal Year 2006. Retrieved October 24, 2006 from <http://www.acf.hhs.gov/programs/hsb/research/2006.htm>

Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2002). Age 21 cost-benefit analysis of the Title I Chicago Child-Parent Centers. *Educational Evaluation and Policy Analysis*, 24(4), 267-303.

³⁹ Making program quality improvements to Head Start would involve additional program costs, most notably for increased teacher qualifications, which are expensive to provide given the need for increased teacher salaries and education expenses. FIGHT CRIME: INVEST IN KIDS estimated the additional per-child costs for increased teacher qualifications based on a recent Center for Law and Social Policy analysis. The CLASP analysis estimated the cost of increased teacher qualifications in 2005 proposed Head Start legislation at \$2.7 billion to \$3.4 billion over six years. Using \$3 billion over six years as an average of these two figures, we calculate an annual total program cost per year of \$500 million. Adding \$500 million to the Head Start 2007 annual funding level of \$6.786 billion yields \$7.286 billion as a rough estimate of total annual costs for Head Start with increased teacher qualifications per year. These increased teacher costs represent 7 percent of the total annual funding level with the added teacher funding increase included. Therefore, we applied this 7 percent increase across the whole program to the per-child program cost: increasing teacher qualifications would involve raising the per child program costs of \$7,287 by 7 percent, a \$510 increase to \$7,797. This \$7,797 estimate (in 2005 dollars) for Head Start is comparable to the inflation-adjusted per-child program cost of the CPC program, which is \$8,016 in 2005 dollars. (This inflation adjustment for CPC program costs from 2002 dollars (\$7,384) to 2005 dollars was calculated using the Consumer Price Index inflation calculator, available at the Bureau of Labor Statistics website.) Therefore, FIGHT CRIME: INVEST IN KIDS will use the \$7,797 estimate for Head Start program costs with increased teacher qualifications as the basis for benefit-cost calculations in this report.

Center for Law and Social Policy. (2005). Cost of Meeting House and Senate Proposed Head Start Teacher Qualification Requirements. Retrieved October 23, 2006 from http://www.clasp.org/publications/head_start_memo.pdf

U.S. Department of Labor, Bureau of Labor Statistics. (2006). Inflation Calculator. Retrieved November 1, 2006 from <http://www.stats.bls.gov/>

⁴⁰ For the dollar figures cited in this section of the report, we used the earlier benefit-cost analysis of CPC program conducted at age 21, which found a benefit cost ratio of \$7 for every dollar spent. The CPC program age 24 benefit-cost analysis results for the specific categories of expenditures such as education or crime are not yet available.

Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2002). Age 21 cost-benefit analysis of the Title I Chicago Child-Parent Centers. *Educational Evaluation and Policy Analysis*, 24(4), 267-303.

Reynolds, A.J., & Temple, J.A., (January 20, 2006). Prevention and cost-effectiveness in early intervention: A 20-year follow-up of a Child Parent cohort. McEvoy Lecture Series on Early Childhood and Public Policy, Humphrey Institute of Public Affairs, University of Minnesota.

⁴¹ Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2002). Age 21 cost-benefit analysis of the Title I Chicago Child-Parent Centers. *Educational Evaluation and Policy Analysis*, 24(4), 267-303.

⁴² Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2002). Age 21 cost-benefit analysis of the Title I Chicago Child-Parent Centers. *Educational Evaluation and Policy Analysis*, 24(4), 267-303.

⁴³ Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2002). Age 21 cost-benefit analysis of the Title I Chicago Child-Parent Centers. *Educational Evaluation and Policy Analysis*, 24(4), 267-303.

⁴⁴ Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2002). Age 21 cost-benefit analysis of the Title I Chicago Child-Parent

Centers. Educational Evaluation and Policy Analysis, 24(4), 267-303.

⁴⁵ This estimate of the benefits of high-quality Head Start was calculated as follows: 6,400 eligible children not served multiplied by the \$7,797 per child cost of Head Start (which includes a 7% increase for improved teacher qualifications) equals \$49,900,800, the estimated cost to serve these eligible children. Applying the \$10.15 per every dollar spent benefit-cost ratio to the \$49,900,800 estimated cost of serving eligible Head Start children (10.15 X 49,900,800) yields \$506,493,120, which is approximately \$500 million, in total benefits for providing improved, higher-quality Head Start to 6,400 children for one year.

The estimate of 6,400 eligible children not served by Oregon Head Start is based on data from: Oregon Department of Education. (2005, March). Oregon Head Start Prekindergarten: Investing In Oregon's Future. Report to Oregon's Seventy-Third Legislative Assembly.

United States Department of Health and Human Services. (2006). Head Start Program Fact Sheet – Fiscal Year 2006. Retrieved October 24, 2006 from

<http://www.acf.hhs.gov/programs/hsb/research/2006.htm>

Reynolds, A.J., & Temple, J.A., (January 20, 2006). Prevention and cost-effectiveness in early intervention: A 20-year follow-up of a Child Parent cohort. McEvoy Lecture Series on Early Childhood and Public Policy, Humphrey Institute of Public Affairs, University of Minnesota.

⁴⁶ The estimate of the public benefits of high-quality Head Start was calculated as follows: Instead of applying the \$10.15 for every dollar spent (which is the total benefit), FIGHT CRIME: INVEST IN KIDS applied the portion of the total benefit that is returned to the public (this includes taxpayers and crime victims), called the public benefit, which is \$6.87 for every dollar spent, calculated for the Chicago CPC program benefit-cost analysis. The difference between these two figures is the amount of the benefit that goes to the program participants directly but that is not returned to the public. Multiplying the \$6.87 public benefit by the \$49,900,800 estimated Head Start program cost (calculated in the preceding endnote) yields \$342,818,496, which is approximately \$300 million, in public benefits for providing high-quality Head Start to 6,400 children for one year.

⁴⁷ The estimate of the public benefit per Oregon taxpaying household provided by high-quality Head Start was calculated as follows: The number of Oregon federal individual income tax returns (which includes single and joint returns) was 1,604,383 in 2004. Dividing the estimated public benefit of high-quality Head Start (\$342,818,496, calculated in the preceding endnote) by the number of Oregon singly- and jointly-filed federal tax returns (1,604,383) yields \$213,68, which is approximately \$200 per taxpaying Oregon household. Alternately, the estimate of the public benefit per Oregon household (irrespective of taxpayer status) provided by high-quality Head Start yields a comparable figure of \$240.52, which is also approximately \$200 per Oregon household. (This figure was calculated by dividing the estimated public benefit of high-quality Head Start (\$342,818,496) by the number of Oregon households (1,425,340).)

Internal Revenue Service. (2006). Table 2. - Individual Income and Tax Data, by State and Size of Adjusted Gross Income, Tax Year 2004. Retrieved October 23, 2006 from <http://www.irs.gov/taxstats/indtaxstats/article/0,,id=103106,00.html>

U.S. Census Bureau, (2006, August). 2005 American Community Survey, Selected Social Characteristics: Oregon. Retrieved November 8, 2006 from <http://www.census.gov/acs/www/Area%20Sheets/Area%20Sheet%20OR.doc>





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