EARLY CARE AND EDUCATION

The Economic Case

***Early Care and Education: The Economic Case* is the first in a four part series on early care and education (ECE) for children birth to age five.** Future briefs will address the importance of **quality** ECE to child brain development; **access** to quality care for diverse parent and child needs; and **affordability** of quality care across the income distribution.

Partnerships for Early Learners, a program of Early Learning Indiana, funded the research and organizing work of the regional coalition to support quality early care and education. Indiana is behind in responding to decades of research on the importance of ECE to quality of life, economic prosperity, and the overall health and education of our population.

In 2015, Metro United Way and the Community Foundation of Southern Indiana partnered to convene area leaders to discuss the need to do more to improve cradle to career quality of life in southern Indiana. A series of discussions led to the establishment of a five-county partnership that includes the Southern Indiana Louisville Metro Counties (SILM): Clark, Floyd, Harrison, Scott, & Washington. The group established teams to begin strategizing regional approaches to address leverage point issues in our communities. The Early Care and Education (ECE) team hit the ground running and secured a grant to help further the coalition efforts. The Southern Indiana Early Learning Coalition continues to meet regularly.

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Investments in high quality early care and education (ECE) provide immediate benefits to local business and the region's economy.[1] Early Care and Education enjoy healthy economic development multipliers in both employment and earnings.[2] This means that ECE produces economic activity and benefits beyond the transactions between parents and providers. Society's investments in early childhood education and care "can be an essential component in economic development."

Southern Indiana's future economic growth depends on supporting today's workers and

building an educated 21st century labor force. ECE has higher than average output multipliers and lower, but still meaningful, employment multipliers (Figure 1 for an explanation of these measures of economic impact).[3] According to Regiontrack, in the state of Indiana (2012), birth to five care and education had the following statewide impact:

* Direct Output = $625.1 million
  Total Output = $1.18 billion
* Direct Earnings = $311.7 million
  Total Earnings Impact = $540.7 million
* Direct Employment = 26,249
  Total Employment Impact = 36,180

Child care directly impacts earnings for three groups of workers: parents, child care workers, and the children that will comprise tomorrow's work force. Increased earnings of all three groups have additional induced effects on both the local and national economy.

For every public dollar invested in quality ECE tax payers enjoy a return between $2 and $10 in combined public savings and revenue.[4] These public finance benefits are the result of increases in current and future tax revenue due to higher household earnings and savings resulting from reduced expenditures on special education, healthcare, welfare, social services, and crime.[5]

Decades of research support increases in both public and private investment to maximize enrollment of children in high quality early care and education from birth.

Increase Labor Force Participation, Improve Reliability and Productivity

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Parenting workers' access to quality, affordable early care and education provides immediate benefits to employers and our larger economy. Quality care provides a safe, nurturing environment, proper adult/child ratios, and planned activities that support learning. Paths to QUALITY™ is Indiana's statewide rating system. Programs rated Level 3 or 4 are considered high quality. When parents and children have access to consistent and affordable quality care, employers enjoy the following benefits:

* Increased labor force participation of parents of children under age five.[6]
* Improved reliability of workers who parent young children.[7]
* Lower employee turnover.[8]
* Increased productivity of parents and organizations.[9]

Affordable access to high quality reliable child care benefits business and the larger economy.

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Figure 1: Measuring Economic Impact

Economists use models of economic activity and sector linkage effects to generate regional "multipliers" that allow planners and community economic development professionals to estimate the impact of a new plant or business or the closing of a major area employer. Over the last 15 years, significant research has employed input-output analysis to understand the direct, indirect and induced effects of the child care sector on regional economies.

Direct effects: the change in economic activity in the child care industry. This will lead providers to generate more revenue and employ more child care workers.

Indirect effects: a measure of inter-industry purchases spurred by industry spending. This is a measure of the economic activity triggered in a region as a result of purchases of goods and services in the region by area child care businesses. Child care providers may purchase more food which will impact output, earnings, and employment among groceries or food service providers.

Induced effects: the impact of household spending. This is a measure of the economic activity of households whose earnings are affected by the direct and indirect effects. Increased revenue in child care can lead to new employment and/or higher pay and those child care workers will likely spend the increase in local businesses as will the employees of the grocery or food service.

Multipliers are presented as Type I and Type II.

Type 1 Multiplier = (direct effect + indirect effect)/ direct effect

Type 2 Multiplier = (direct effect +indirect effect + induced effect)/direct effect

Economic development studies include three multipliers: output, earnings and employment (See Indiana's numbers for early care and education on page 2).

Output multiplier: estimates the total sales that would be generated in the entire economy by each dollar of increased direct spending for child care services.

Employment multiplier: estimates the number of jobs that would be created throughout the regional economy from an increase in demand for child care services large enough to stimulate the addition of one new job in the child care industry.

Earnings multiplier: estimates the increase in regional earnings generated by increases in earnings in child care that result from increases in employment and wages.

Source: Warner, Mildred. 2009.

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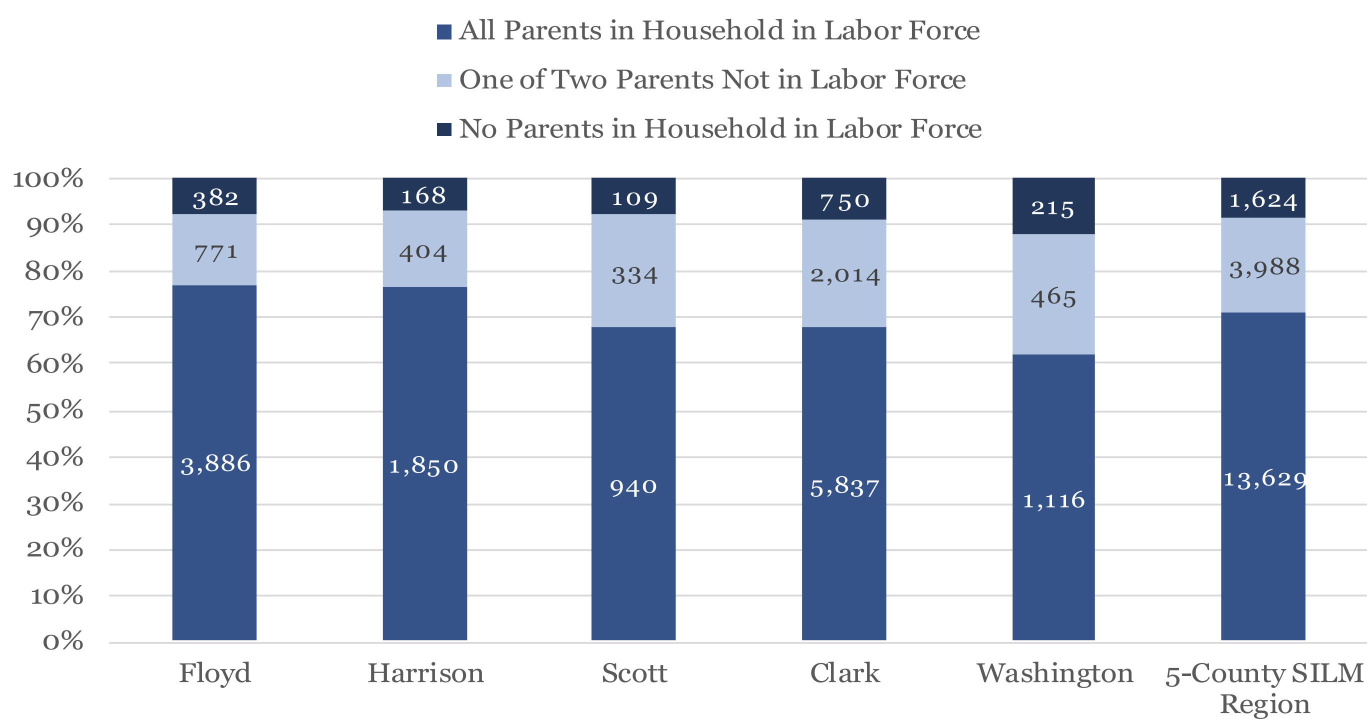
Labor Force Participation

U.S. labor force participation peaked at 67.3% in 2000 and has fallen to its lowest rate since the 1970's at 62.7% in May 2017.[10] The number is likely to continue its descent as baby boomers age out of the workforce and mechanization continues. Labor force participation in Southern Indiana Louisville Metro (SILM) is high, but could improve (Figure 2). In particular, the region has a significant share of workers employed part-time who would prefer full-time work.[11] Child care is often a barrier to such a move.[12]

Historically, women have had lower labor force participation rates than men. Research suggests that increasing women's participation in the paid labor force has great potential to increase overall labor force participation rates and annual Gross Domestic Product (GDP).[13] Women perform the vast majority of unpaid caring labor in the U.S. When women choose to outsource this caring labor in order to go to school or work themselves, their choices have an impact beyond their own employment and earnings as child care employment rises.

The labor force participation of mothers of young children rose from 40% (34% for mothers of children under 3) in the mid-1970's to 65% in 2012 (60% for mothers of children under 3),[14] but no major change in our schools or institutions of care accompanied the shift.

Figure 2: Labor Force Participation in Households with Children Under 6 (2012-2016), SILM



Source: U.S. Census Bureau. *American Community Survey*, 5-year Estimates 2012-2016. Table B23008.

From 1979 to present, U.S. wages stagnated such that households sending a second parent into the labor force and single parent households did not enjoy wage increases sufficient to help cover the added expenses of having both parents in the labor force, including child care. Households required two working adults to maintain the standard of living they previously enjoyed with one parent working. For low, and even moderate-income workers, the financial burden of child care became a barrier to work:

* 11.4% of the nonworking poor have children, a full 70% of them cite "taking care of home/ family" as the reason they are not in the work force.[15]

* In a 2017 survey of Louisiana parents of children under 5, women were 7 times more likely than men to quit a job, 5 times more likely to leave full-time work in favor of part-time work, and 6 times more likely to turn down a promotion due to child care concerns.[16]

* Combined with high rates of single parent female headed households, decisions to work less or forego a promotion impact child poverty. Single parents were at least twice as likely as married parents to report making these choices.[17]

Access to affordable high quality ECE boosts labor force participation of parents, moving more parents from part-time to full-time work, and putting parents in a position to accept promotions that require a reliably consistent work schedule. These changes increase household income and reduce child poverty.

Productivity

For more than 20 years, studies have shown positive impacts of reliable high quality child care on parent productivity in the work place.

* A survey of American Business Collaboration members in 2000 found that 63 percent of member employees reported improved

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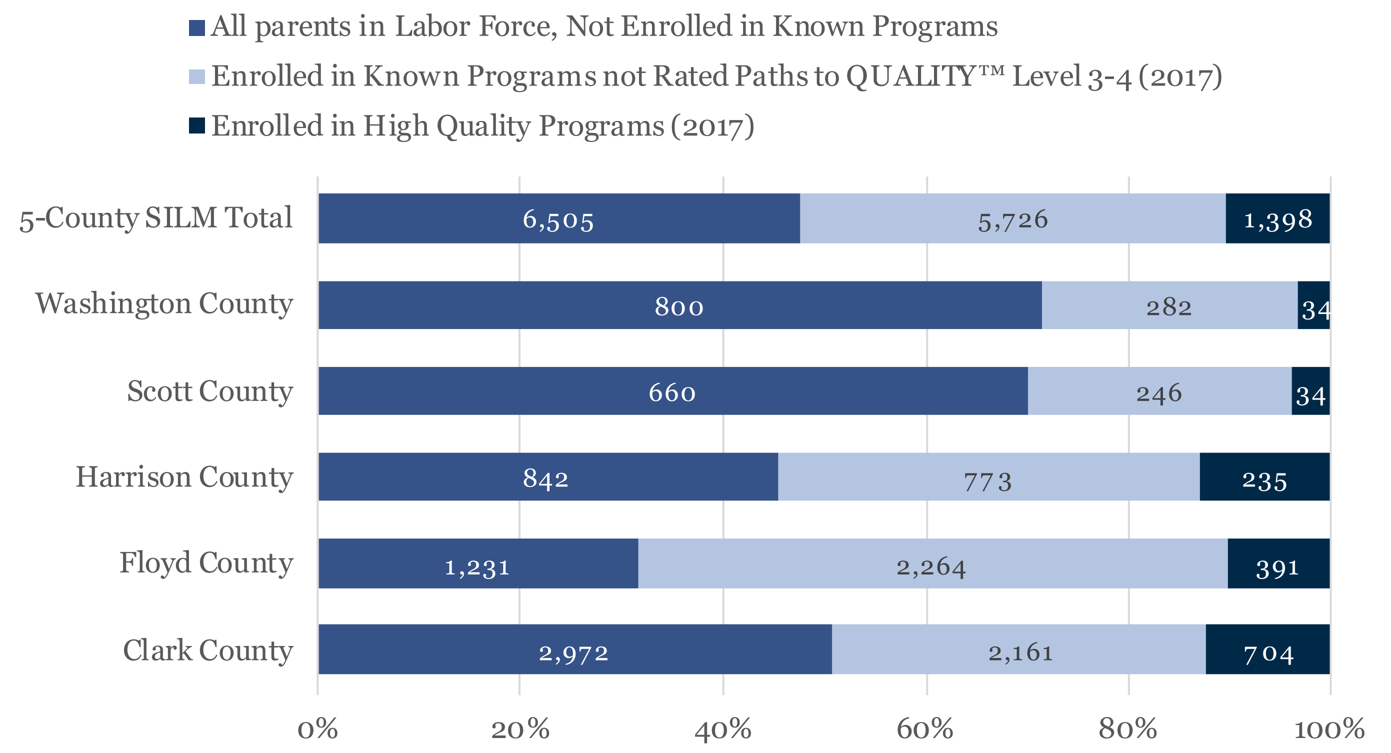
Figure 3: Children of Working Parents: Not in Known Programs, in Known Programs, and in Paths to QUALITY™ Level 3 and Level 4 (High Quality) Known Programs



Sources: U.S. Census Bureau. *American Community Survey*, 5-year Estimates 2012-2016. Table B23008; Early Learning Advisory Committee. *2018 ELAC County Dashboards*. http://www.elacindiana.org/data/early-childhood-profiles/.

Figure 4: Building the Soft Skills of a Quality Work Force

Sixty percent of business decision-makers surveyed by Zogby Analytics say it's more difficult to find job candidates with adequate social-emotional skills than candidates with adequate technical skills. Southern Indiana business leaders echo this concern. Many aspects of brain development and socialization responsible for these behaviors and skills are developed from birth to age 5. Universal pre-K is a vital step, but birth to age four care must be part of a quality early care and education system. Pre-K studies indicate more difficulty moving social and emotional skills in a single year than for math and language skills. Moreover, low income kids are far more likely to have deficits in this area, making it difficult to close gaps in achievement, education, and income.

The Perry Preschool Study found improvements in "character skills" related to motivation and behavior problems explained a large share of the program's positive adult outcomes (Heckman 2006).[*] Another study (Jones et al. 2015) of nearly 800 low-income kids documented their social-emotional development in kindergarten and, without intervention, documented positive and negative milestones up to age 25. The sample draws from a low-income school and half the kids are at risk for significant behavior problems. The study provides important information on the relationship between the social-emotional development of low-income kids at the start of kindergarten and their adult outcomes.

For every one-point <u>increase</u> in social competence score, the study found children;

* 54% more likely to graduate from high school.
* Twice as likely to graduate from college in early adulthood.
* 46% more likely to have full-time employment at age 25.
* 68% less likely to have been arrested for a severe offense by age 25.
* 66% less likely to have days of binge drinking in the past month by age 25.
* 55% less likely to have days of marijuana use in the past month by age 25.
* 54% less likely to have years on medications for emotional or behavioral mental health issues through high school.

For every one-point <u>decrease</u> in social competence score, the study found children

* 63% more likely to be receiving public assistance at age 25.
* 67% more likely to have been arrested at some point through high school.
* 60% more likely to have been arrested shortly after high school (ages 19-20).
* 63% more likely to have made a court appearance shortly after high school (ages 19-20),
* 61% more likely to have stayed in a detention facility both through high school or shortly after.
* 86% more likely to have a form of drug dependence by age 25.
* 61% more likely to have externalizing mental health problems by age 25.

*Source: Heckman 2006; Shonkoff and Phillips 2000; Jones et al. 2015.
For information and resources on social and emotional development, visit the Robert Wood Johnson Foundation's resource page: https://www.rwjf.org/en/library/collections/social-and-emotional-learning.html.

Figure 5: Local Spotlight: Quality Pre-School in Harrison County Closes the Kindergarten Readiness Gap for Low-Income Kids

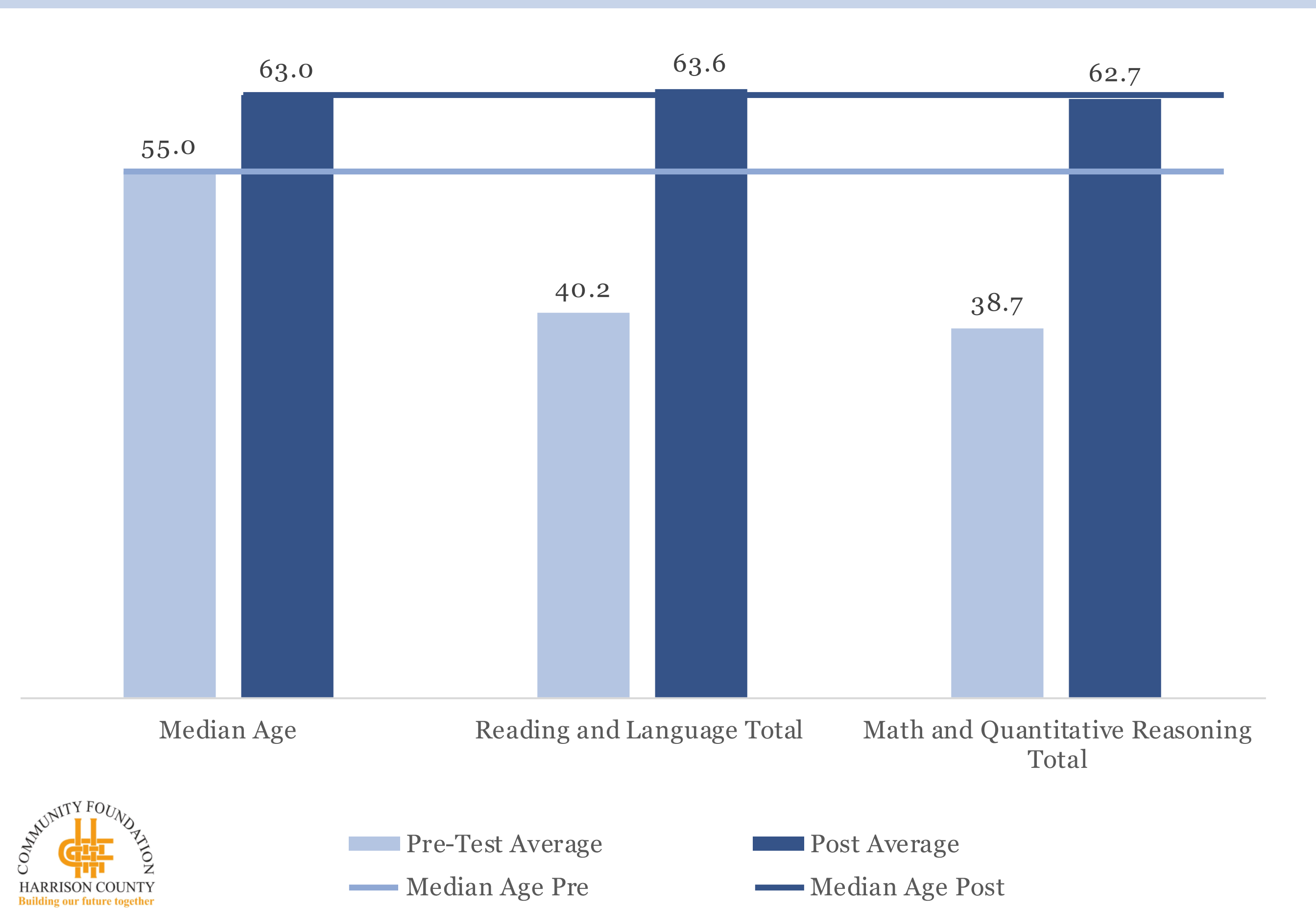
In 2013, the Harrison County Community Foundation began funding JumpStart. They pay for up to 200 low-income 4-year old children to attend all-day pre-K. The project provided a parallel to the state's On My Way Pre-K pilot in one of our local rural communities. By the 2015-2016 school year, the Foundation had all participating programs using the I-STAR Kindergarten Readiness (KR) assessment to measure progress. The score measures represent the demonstrated development level in months.

The I-STAR-KR is not a test, but an assessment based on multiple observations.

Consistent with the national literature, low-income children showed up to pre-K with developmental delays. On average, they were 15-16 months behind in language and pre-literacy skills and math and quantitative reasoning skills. By the end of the school year, however, the gap was closed and students demonstrated capacities consistent with their median age.

JumpStart participants improved in social and emotional development as well, but did not close the gap to the same degree. Kids showed up an average 16.4 months behind expected development and were 10.3 months behind expected development by the end of the school year.

Harrison County JumpStart 2016-2017 Mean Pre and Post Assessment Performance Compared to Median Age (age and assessed development in months)



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productivity while using quality dependent care.[18]

* The average American working parent misses nine days of work per year. That number goes up as kids move through elementary school.[19]
* Among 3,100 parents with access to employer sponsored child care, 95% said on-site child care improved their on-the-job concentration, 87% said it made them more productive, and 79% said it enabled them to volunteer for things not formally required by their job.[20]

A 2017 study[21] of Louisiana parents of young children and their employers found significant costs to business associated with child care issues. The Indiana University Public Policy Institute reproduced the Louisiana impact models for the state of Indiana[22]:

* Absences and employee turnover costs Indiana employers an estimated $1.8 billion a year.
* Child care issues result in a $1.1 billion annual loss of economic activity in Indiana.
* Indiana loses an estimated $118.8 million annually in tax revenue due to child care issues.
* Lack of quality reliable child care leads to more time spent at work on personal issues, which is a key factor shaping worker productivity.[23]

Lower turnover increases company productivity and improves morale. These impacts on work also affect the larger community as parents are able to maintain stable work and income.

Reliability

In a recent focus group with area employers, absenteeism and high turnover were cited as top concerns for Southern Indiana businesses. A large portion of children in households with all parents working are not enrolled in known programs, much less in Paths to QUALITY™ rated high quality programs (Figure 3). This may contribute to regional challenges with labor force reliability.

Absenteeism costs companies enormous sums in lost productivity, but lack of reliability also leads to turnover, which is even more expensive. Replacement costs can be as high as one and a half times the annual salary of an exempt employee and three-quarters the wages of an hourly employee.[24]

A 2017 Louisiana Study[25] further explored the impact of child care issues on employee reliability and absenteeism.

* Nearly 19% of respondents report that child care issues caused them to leave full-time employment in favor of part-time employment and an additional 9.5% made the decision to remain part-time due to child care concerns.
* Half of survey respondents rely on family members for child care (39% with an at-home parent and 12% with other family members).
* One in six respondents quit a job due to child care issues.
* One in 13 were fired due to recurring child care issues.
* 40.8% of parents with children under five had missed work, 32.9% were tardy, and 42.4% left early due to child care issues in the last three months. There were no statistically significant

40.8% of parents with children under 5 had missed work, 32.9% were tardy, and 42.4% left early due to child care issues in the last 3 months differences between men and women in these impacts on reliability and productivity.

* A 1986 study found that reliable child care reduced missed work days by as much as 20%-30%.

Research suggests companies should look closely at how much lack of quality reliable child care costs them and consider investing to support employee access to high quality reliable care. Programs can be cheaper than the costs of lost productivity and turnover.[26]

Create Good Jobs in Early Care and Education

Increasing the quality and availability of early childhood education and care creates good jobs.[27] When families outsource child care, the demand for child care workers and early education teachers increases. High quality care requires more training and will have to pay more to attract a stable, educated workforce.

Indiana ranks 39th among states for earnings per worker in the child care sector at $11,874. Among family in-home providers, per proprietor earnings are $8,034 and among center based care that figure is a much higher $15,681.[28]

The average salary for preschool teachers in southern Indiana is $31,245,[29] but that figure is inflated by the presence of several public school-based pre-school programs. Earnings among child care workers outside the schools tend to be far lower. Low wages make it hard to attract a quality stable work force and make it difficult for workers to invest in advancing their skills to improve quality.

In order to reap the full benefits of quality early care and education, public and private investment, and wage and benefit improvements for working parents are required to support higher wages for child care workers and preschool teachers.

The SILM region expects a deficit of 536 workers in the ECE and care workforce by 2026.[30] Even without any deliberate sector expansion, the region is unable to supply the labor force needed to meet demand. The sector is ripe for growth, but requires investment and systems and structures that ensure revenues that support the true costs of providing care.

The ECE and care workforce will induce additional economic effects. As their numbers increase and their incomes rise, they will pay more taxes and will also spend more of their income in the community.

Develop Tomorrow's Workforce

The largest returns on investments in ECE come from the long term impacts on child participants. From birth to age five, children develop the cognitive and neural foundations upon which development builds. That key formative time cannot be replaced. Investments in birth to five will yield a stronger, smarter work force, with more of the social and emotional skills needed to succeed (Figure 3). In addition, the investment will result in savings in other areas of government programming and will increase the tax base to further support quality early childhood programs.

* Investments in children will pay returns to this region's economy: 60-70% of child participants will spend their careers in Indiana and 40-50% nationally remain in the same metro area.[31]

* For every dollar invested, early childhood programs increase present value of state per capita earnings by $5-$9.[32]
* Kindergarten retention costs SILM school districts an estimated $807,291 in 2017.[33] High quality care from birth to age five can reduce kindergarten retention by improving language and quantitative reasoning skills (Figure 4).

Three strong randomized controlled trials that include long term follow-up (Perry Preschool, Abecedarian Educare, and the Chicago Child Parent Center), and several other studies that lack an experimental design, show significant and continuing benefits[34]:

* **Perry Preschool**—19% earnings advantage of participants over counterparts that were not enrolled.[35]
* **Abecedarian/Educare Child Care**—26% earnings advantage over control group.
* **Infant Health and Development Program and Nurse Family Partnership** —12% earnings advantage of participants.
* Head Start sibling comparison shows effects on income at 11%.
* The Chicago Child Parent Center neighborhood comparison shows test score effects that predicted 11% earnings effects.
* Several other studies from across the country note pre-K entry test score differences that predict earnings effects between 6% and 15%.

Harrison County's JumpStart program demonstrates how a year of full-day high quality preschool can close existing gaps in preschool language and quantitative reasoning skills (Figure 4). Long term well-structured research provides strong evidence that ECE is a sound investment in our future citizens and our future workforce.

The Bottom Line

ECE is a leverage point for addressing a wide range of economic and social concerns. From current labor force challenges to future innovation and development, ECE holds great promise for realizing human potential and creating strong quality of life. Public and private investments in high quality ECE will:

* Improve the current workforce: increase training and education, reduce turnover, and improve attendance, reliability, and productivity.
* Increase employment and wages in ECE.
* Increase parent earnings immediately which will mean fewer children will be raised in poverty.
* Generate economic growth by increasing per capita earnings, which is good for business. The estimated return on public investment for Indiana is $3.83 to $4.
* Increase educational attainment in the region which will have a significant positive impact on ALL wages in the region.
* Improve health outcomes and lowers healthcare costs.
* Child participants perform better in school, have higher test scores, stronger social skills, and become better workers with higher earnings.
* Reduce special education costs in local schools by 20%-80%.
* Reduce future public spending on healthcare, welfare, juvenile justice, criminal justice, and child welfare.
* Raise property values as the long-term benefits become more well understood, and people make choices of where to buy homes based on access to universal quality ECE.

For greatest impact, public and private investments need to start with strong support for parents and children from birth.

Endnotes

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EARLY LEARNING INDIANA
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Funding, technical assistance, information resources, and professional and coalition development opportunities generously provided by Partnerships for Early Learners.

Partnerships for Early Learners increases access and quality of early childhood programming across Indiana. With the generous support of the Indiana Family and Social Services Administration's Office of Early Childhood and Out-of-School Learning and the Lilly Endowment, Early Learning Indiana aims to ensure that 75% of Indiana's children in child care or preschool are connected with a high-quality program and that their families are engaged and supported.