

## CHAPTER 39

# Investing in Early Childhood Development and Infant Mental Health

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The United States has almost 5 million young children and their families living in poverty (see Piccolo & Noble, Chapter 9, this volume) yet has the ability to support them in ways that may substantially reduce their burdens. For example, elderly persons living in poverty in the United States decreased from almost 30% in 1967 to 8.8% today (Proctor, Semega, & Kollar, 2016). This was the result of intentional policies that worked. For many, it is hard to understand how we tolerate these levels of poverty for children when we spend \$60 billion annually on prison expenses and more than \$3 trillion for wars in Iraq and Afghanistan.

Children have replaced elderly persons as the most impoverished age group in the country. For children under age 18 today, 19.7%, or 14.5 million, were in poverty in 2015. Children under age 18 comprise 23.1% of the country's total population but 33.6% of the people in poverty. For children under age 6 in 2015, the poverty rate was 21%, or 4.9 million (Proctor et al., 2016). Even more alarming are the racial disparities in poverty, as 12.3% of white children live in poverty compared to 36% of black children and 31.9% of Hispanic children (DeNavas-Walt & Proctor, 2015).

Many of today's poverty reduction solutions focus on education. Our K–12 system is based on free, full-day education, and universal access is guaranteed. The workforce is licensed or cer-

tified, with the majority of teachers with bachelor's degrees and many with master's degrees as well. This system has almost 100,000 public schools that are funded by \$600 billion annually, raised through mainly local tax dollars and serving 50 million children. Unfortunately, this system is not eliminating child poverty. Press accounts of weaknesses of the system are often highlighted when test scores are released, and we learn that children, as early as third or fourth grade, are already failing to hit marks of proficiency in reading and math.

Many would argue that our education system is a necessary, but far from sufficient, means to reduce poverty, as schools alone cannot change children's trajectories away from poverty. Children often come from challenging environments in which they encounter a number of adverse experiences. While the adverse childhood experiences (ACEs) study (Felitti et al., 1998) has gained wide recognition, showing the long-term impact of negative experiences on health and educational outcomes, these experiences are particularly damaging for young children. It has been shown that ACEs during the early childhood period are a risk factor for academic and behavior problems in kindergarten. Young children with increasing numbers of adverse experiences have increased odds of attention problems, social problems, aggression, and below-average literacy skills, all of which

put the children on a path toward poor academic achievement and poor health (Fiscella & Kitzman, 2009; Jimenez, Wade, Lin, Morrow, & Reichman, 2016). In a national urban sample, a child's ACE score of 3 or more was associated with problems or below-average performance in every outcome measure studied. These findings, suggesting a dose–response relationship between an ACE score and outcomes, is consistent with the original findings of the ACE study (Bethell, Newacheck, Hawes, & Halfon, 2014; Brown et al., 2009; Felitti et al., 1998; Flaherty et al., 2009).

In the United States today, 70% of mothers are working, up from 40% in 1971. Even for mothers with children under age 6, 64% are working (Edelman, 2015). According to the Kids Count data center, in 2014, more than one-third of children lived in single-parent homes. Of single mothers, 75% worked, while 83% of single fathers worked (Bureau of Labor Statistics, 2016). For married parents, 61% were both working. Of children living in poor families, 31% of these families have at least one parent employed full time (National Center for Children in Poverty, 2017). Almost half of children under age 6 in families led by a female were in poverty. This was almost five times the rate of children in married-couple families, in which only 10.1% were in poverty (Proctor et al., 2016).

As a result, children need child care (out-of-home care), yet the costs for quality is high, and the government spends little to support children in these settings (see Trigg & Keyes, Chapter 37, this volume). One can argue that the United States spends next to nothing supporting optimal child development. In the 2016 rankings from the Organization for Economic Cooperation and Development, the United States ranks 35th among developed economies in preschool enrollment. Head Start reaches fewer than half of eligible children (ages 3 and 4 years) while Early Head Start, serving children until their third birthday, reaches less than roughly 4% of eligible children. In terms of federal child care support, only an estimated 15% of eligible children receive a subsidy, including less than 10% of infants and toddlers (Barnett et al., 2016; Bryans, 2015; Chen, 2015). Child care is expensive, as infant care exceeds the cost of public college in more than 31 states (Child Care Aware of America, 2016).

Despite calls for quality, child care wages are low, and underpaying preschool teachers is a recipe for low quality. Nationally, the me-

dian salary for a preschool teacher is \$28,570, or 52% of that for an elementary school teacher who earns \$54,890, and 55% of that of kindergarten teachers at \$51,640 (U.S. Department of Health and Human Services, U.S. Department of Education, 2016). Child care workers earn just \$20,322 per year. As a result, 46% of early childhood teachers receive some sort of federal income support (Whitebook, McLean, & Austin, 2016). While there has been much attention to expanding access, there has to be equal attention, at a minimum, to addressing quality, as expanding access without ensuring quality could have negative, unintended consequences.

## Evidence Base

The evidence documenting the benefits of investing in early childhood, in terms of both the return on investment and improved outcomes for individual children, continues to grow. Most recently, James Heckman, the Nobel laureate in economics who studies the economics of human development, published a working paper with colleagues, detailing the improved return on investment for high-quality programs that serve low-income children starting in infancy, as opposed to starting at age 3 or 4 years. This increased return on investment is the result of improved high school graduation rates, reduced crime and incarceration, reduced special education, improved educational attainment, and improved health. Overall, the rate of return from these high-quality 0–5 programs was found to be 13% per year compared to an estimate of 7–10% per year for similar programs that begin at age 3 years (Garcia, Heckman, Leaf, & Prados, 2016).

The findings are based on random assignment in two programs in North Carolina from the 1970s that tracked participants through age 35. Both of these programs, the Carolina Abecedarian Project and the Carolina Approach to Responsive Education, enrolled low-income African American children when they were just 8 weeks old and provided care 5 days a week (from 7:45 A.M.–5:30 P.M.) for 50 weeks per year, until age 5. The goals of the programs focused on the whole child and were designed to support the language, motor, cognitive, and social–emotional competencies of the enrolled children. These programs also had a health component, as they provided regular medical checkups.

Although costs of the program were high (\$18,514 per participant in 2014 dollars), so too were the benefits, with a rate of return estimated at 13% per year and a cost–benefit of 7.3. This means that there was substantial value of the public investment, in that 7.3 dollars were generated for every dollar spent on the program (Garcia et al., 2016).

Another relatively recent study examined the impact of early psychosocial stimulation for disadvantaged children in Jamaica. This project randomly assigned growth-stunted children between ages 9 months and 2 years. Stunted growth in developing countries is an indicator of severe economic disadvantage and is associated with malnutrition and poor cognitive development. Children were assigned to groups receiving psychosocial stimulation, nutritional supplements, or both the stimulation and supplements, or to a control group. These four groups were also compared to a group of nonstunted children in Jamaica (Gertler et al., 2014).

The psychosocial stimulation intervention consisted of 2 years of weekly play sessions at home for 1 hour with a trained community health aide. These home visits were designed to develop the child’s cognitive, language, and psychosocial skills. The nutritional intervention was provided weekly for 2 years and included calories, protein, and micronutrients.

The psychosocial stimulation intervention (groups 1 and 3) had positive impacts on psychosocial skills and school attainment, and reduced participation in violent crimes through age 22, while the nutrition-only group had no long-term benefits. Furthermore, this group had earnings that were 25% higher than those of the control group and caught up to the earnings of a nonstunted comparison group. In fact, 94% of members of the stimulation group were employed in full-time jobs at age 22. Therefore, the stimulation intervention compensated for early developmental delays, narrowed the achievement gap, and reduced later-life inequality (Gertler et al., 2014).

Another longitudinal study of young children who came through the Smart Start and More at Four programs in North Carolina between 1988 and 2000 provides important insights. The research was designed to see whether the benefits of the educational programs lasted over the long term or if there was fadeout by the end of elementary school. The research also looked for spillover effects by examining the records of more than 1 million children who may have benefited from the existence of these

programs even though they themselves did not directly participate in them (Dodge, Bai, Ladd, & Muschkin, 2017).

Smart Start, a statewide effort in North Carolina, was designed to improve early childhood services for children under age 4. It was not a specific program per se; instead, state funding allowed county administration of programs and supports for children from birth to age 5 through child care vouchers and child care services, family support services, professional development, and collaborations among local agencies. The state’s PreK program, originally called More at Four, started many years after Smart Start and was for 4-year-old children with an annual family income at or below 75% of the state median, limited English proficiency, disability, chronic illness, or developmental need.

Fadeout, which has been observed in evaluations of Head Start (U.S. Department of Health and Human Services, Administration for Children and Families, 2010), has empowered opponents of Head Start and early education funding. Furthermore, a randomized trial of Tennessee’s PreK program showed that although children had initial gains in cognitive skills during the PreK period, these gains had a complete fadeout just 1 year later, and surprisingly, an adverse impact after several years (Lipsey, Faran, & Hofer, 2015). However, the evaluation of Smart Start and More at Four showed that there were no fadeout effects, as the results held steady, or showed significant increases, through fifth grade.

Perhaps most interesting, this study was also designed to identify the outcomes for all children in the state, regardless of whether they received services through Smart Start or More at Four. The thinking was that these large-scale programs were designed to saturate communities, whereby all kids would benefit and ultimately be ready to learn, and thereby allow teachers to accelerate their teaching. Therefore, the evaluation detected any “spillover” effect from the intervention.

The ultimate results were particularly encouraging, as benefits were observed for the entire population of young children through this spillover effect. Specifically, these programs were associated with higher math and reading standardized test scores, reductions in special education placements, and reductions in grade retention in third through fifth grade. Strikingly, the relationship between financial investments and children’s educational outcomes was linear, so that every \$100 of increased invest-

ment at the county level improved children's outcomes incrementally (Dodge et al., 2017). Therefore, as the United States spends little on the development of young children compared to other industrialized countries, this study demonstrates the benefits to all children of increasing our investments.

## Impacting Policy

With this ever-growing research base supporting investments in early childhood, the big question is how best to use this to impact policy. On a state level, where most of the success in support of early childhood is happening, I believe the answer starts with the state budget. This is due to the fact that the state budget is the most important policy document used in decision making by governmental leaders. As Richard Nathan (2000, p. 42) noted, "The budget process is the spinal column of public policymaking." Therefore, to be able to influence policy, we need to influence the budget.

To do this, a deep understanding of the budget is needed. To achieve this in Louisiana, an Early Childhood System Integration Budget (ECSIB) was created. The ECSIB was designed as a platform for integrating financial and programmatic information relevant to an early childhood system. This information was organized around some commonly used domains of an early childhood system:

- Access to medical care
- Early care and education
- Family support and parenting education
- Mental health and social-emotional development

Within these four areas, each state department categorizes program-specific information, including the lead contact person, a very brief program description, the population served, the sources of funding for the program, and the parishes (counties in Louisiana) being served. For each line item, actual state and federal dollars invested in the program are detailed.

For example, the Early Care and Education section includes programs from the state's Louisiana Department of Children and Family Services, such as the child care subsidy program and the Head Start State collaboration office, alongside the Department of Education's PreK programs, which include several separate funding sources that are involved in provid-

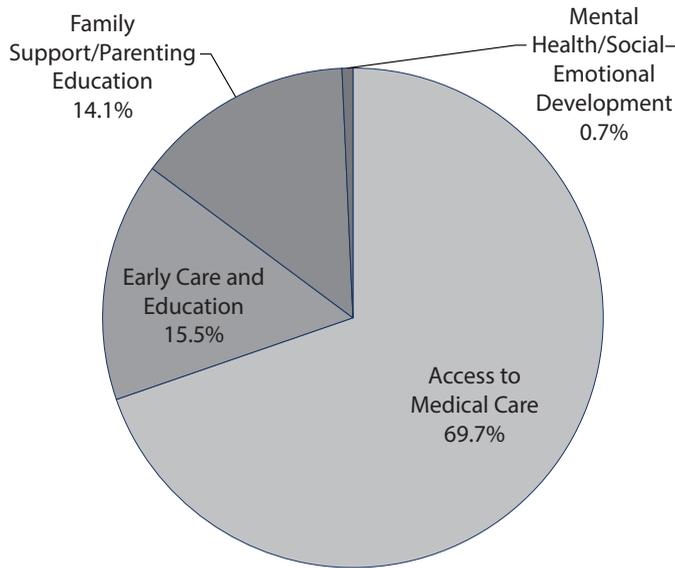
ing distinct PreK programs. Once compiled in the ECSIB (along with any other early care and education programs administered by other state departments), a policymaker or advocate could answer the practical question "How much money are we spending on early education programs to prepare children for school?" The ECSIB provides the answer in one location, eliminating the need to dig through each separate department budget section trying to tease out which programs are providing relevant services.

It should be noted that the ECSIB does not make any judgment or assumptions about what is the proper amount of spending in any specific area. Instead, it simply provides the information to policymakers and other interested parties, so that they can make whatever judgments they feel are warranted. With this "big picture" information, appropriate action can be proposed, debated, and/or pursued. In other words, the ECSIB is not about determining the appropriate amount to spend in any particular category or even overall on early childhood. Instead, the ECSIB builds a greater understanding of the resources allocated to support young children, and how those funds are invested.

The ECSIB is also intended to foster better collaboration across state departments, with programs that share common goals or objectives. By organizing the budget by priority area rather than by department, different departments can more easily see the other services being provided, with similar goals to their own programs. In this way, it becomes clear where there are opportunities for collaboration through the blending of funding streams or other resources, or even possibly where state dollars in one department can be used to match federal dollars in another department.

The ECSIB provides valuable information even at the most basic level of analysis. As is clear in the Figure 39.1, almost 70% of all dollars spent on early childhood in Louisiana are related to the access to medical care priority. This large percentage would be expected due to the size, scope, and long history of the Medicaid program. In fact, Medicaid accounts for approximately 89% of all dollars spent in this priority area.

Early Care and Education, which primarily comprises PreK programs and child care programs, represents almost 16% of the total ECSIB. Similarly, the dollars in the family support/parenting education priority account for 14% of the ECSIB. This section includes the



**FIGURE 39.1.** Fiscal year 2017 early childhood budget for Louisiana.

Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF) cash assistance, and child support enforcement. While this section combines parenting education and family support initiatives, there is a large disparity, as dollars spent toward specific “parenting education” programs represents less than 5% of this entire priority area.

The mental health/social-emotional development section is perhaps most interesting due to the sheer lack of resources in this priority area. As the ECSIB shows, less than 1% of all funds for early childhood are dedicated to this category. Although the ECSIB alone makes no recommendations about the distribution of resources, it is difficult to view this chart and not conclude that insufficient funds are being allocated to support the critical area of social-emotional development.

Fortunately, the ECSIB was embraced universally in Louisiana as the utility of such a budget document was widely appreciated. Legislation to institutionalize the ECSIB was passed as Act 774 of the 2008 Regular Session (see [www.legis.la.gov](http://www.legis.la.gov)). The ECSIB has been provided by state government and posted on their website since June 2010, and updated each year through Louisiana’s 2017 fiscal year (see [www.doa.la.gov/pages/opb/pub/other\\_budget\\_docs.aspx](http://www.doa.la.gov/pages/opb/pub/other_budget_docs.aspx)).

There are certainly limitations in the current ECSIB in Louisiana. To begin with, the information detailed only includes resources that the state is responsible to allocate. Therefore, there is no information about local government spending, or private or philanthropic support. Also, while the ECSIB has garnered much enthusiasm, the full utility of the tool has yet to be realized. The good news is that the ECSIB Louisiana has today does provide a fairly detailed understanding of the investments the state is making in early childhood. The ECSIB has enough information in its current standing to be used as a tool both to nurture collaboration and to provide policymakers and advocates with a fairly clear picture of how resources are being directed toward early childhood. With this information now available as part of the most important policy document in state government, more informed decision making and advocacy are possible for all those willing to jump in and gain a deep understanding of the budget.

### Translating Findings into Policy: An Updated Case Example

The School Readiness Tax Credits in Louisiana (SRTC) resulted from the strong evidence base supporting the benefits of investing in early

childhood programs and from new data available in an economic impact study that documented the importance of the child care sector to the economy of Louisiana. With child care framed as an economic development issue, more traditional means of funding economic development initiatives, such as tax credits, were pursued. As a result, a package of tax credits to support quality child care was developed and became known as the SRTC.

The SRTC was designed to offer four key groups tax incentives for their support of quality child care. These groups include parents, child care owners, child care teachers/directors, and businesses or employers. A complete overview of each of the tax credits is described elsewhere (Nagle, 2009). The SRTC has now been in effect since 2008, and each component has yielded considerable support to the child care sector. In fact, the SRTC has returned \$106 million through tax year 2015. A breakdown of each of the credits follows.

### ***SRTC for Parents***

Families with a child under 6 years of age enrolled in child care are eligible for a tax credit based on the quality rating of the center. The tax credit is refundable (the taxpayer receives the full credit even if it exceeds his or her total tax liability) for families with income less than \$25,000; otherwise, it is non-refundable (the taxpayer receives the credit up to the amount of his or her total tax liability). Figure 39.2 shows the large number of families that benefit from this credit and the dramatic increase since its

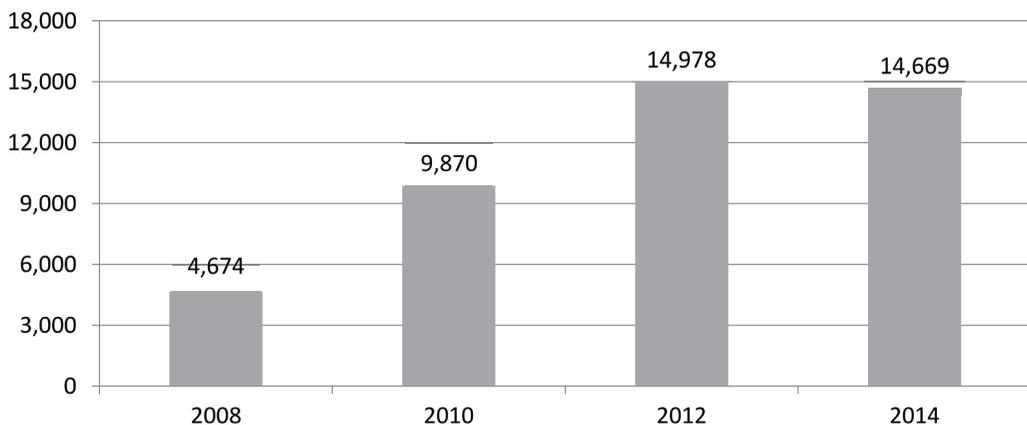
inception in 2008. These increases are due to the participation of child care centers in the rating system, increased quality that is provided, and awareness of parents of the ratings and the tax credits.

In 2008, this credit yielded families \$953,000, and that has grown to \$3.1 million in 2015. The per-family average went from \$204 in 2008 to \$222 in 2014.

### ***SRTC for Providers***

This refundable tax credit assists child care providers and is tied to the center's level of quality, as measured by the rating system, and is based on the number of children served in the Child Care Assistance Program (CCAP) or in foster care, ranging from \$750 to \$1,500 per child. Because it is a refundable credit, both non-profit and for-profit centers can benefit fully. A provider must have at least two stars in order to receive any tax credits. This credit has two intended benefits: (1) to offset a portion of the increased cost of providing higher quality care and (2) to improve access to quality care for children in the CCAP or foster care.

As shown in Figure 39.3, in 2008, this credit yielded providers \$1.6 million, and that grew to \$4.3 million in 2014, down from a high of \$5.4 million in 2012. On average, the credit provided each of the 124 participating providers \$13,257 in 2008, and the 435 participating providers \$15,580 in 2014. The decrease observed from 2012 to 2014 is largely due to the decline in the number of children who receive CCAP subsidies as a result of reduced income eligibility



**FIGURE 39.2.** Number of families benefiting from the SRTC for parents, 2008–2014.

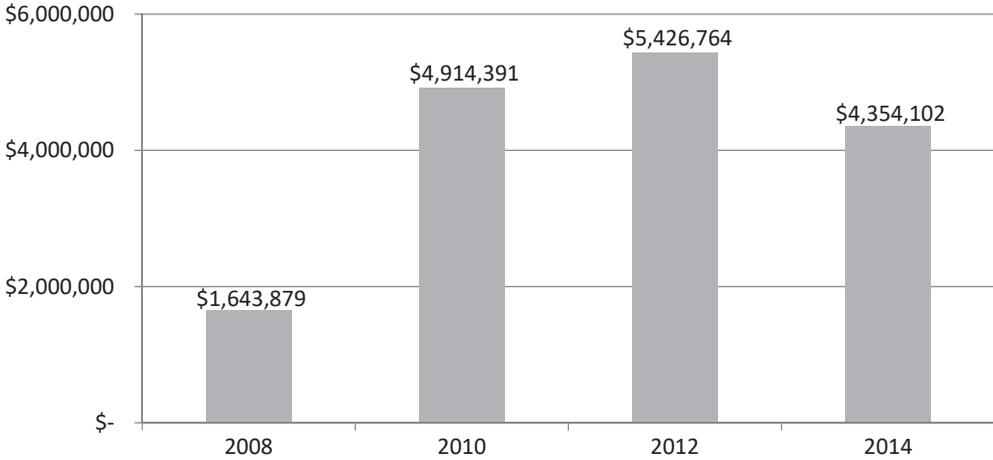


FIGURE 39.3. Amount of SRTC for child care providers, 2008–2014.

and cuts in funding (Stoney, Bronfin, & Rahim, 2016). Overall, the number of state subsidized children decreased 39% during this time.

**SRTC for Directors/Teachers**

This refundable credit is essentially a wage supplement program and is provided directly to child care professionals based on increased levels of educational attainment. These credits effectively provide bonus funds for salaries into the child care system, without driving up the

price of care; therefore, there are no increased costs being passed on to families. The credit is adjusted for inflation and directors and teachers must be employed by the center for 6 months to receive the credit, which ranges from \$1,630 to \$3,260.

As shown in Figure 39.4, in 2008, this credit yielded 866 teachers or directors \$1.5 million, or an average of \$1,700 per participant. This has increased to 3,869 teachers and directors in 2014 sharing \$8.3 million, or an average of \$2,144.

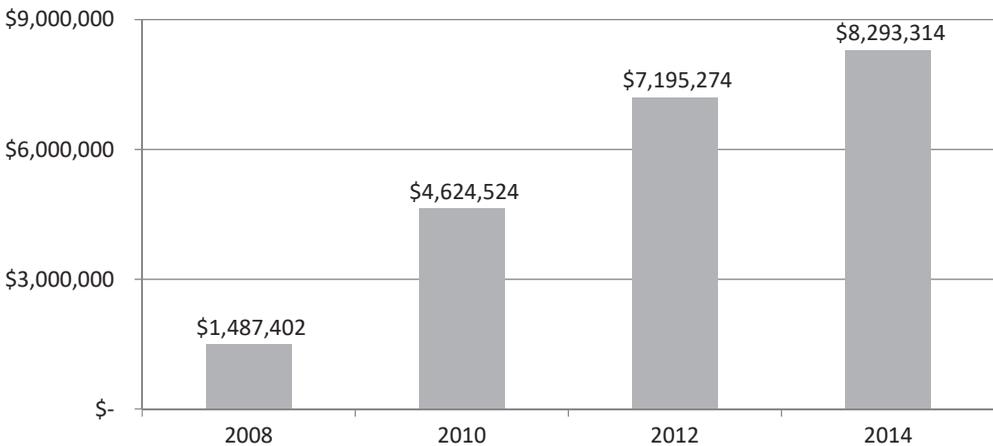


FIGURE 39.4. Amount of SRTC for teachers/directors, 2008–2014.

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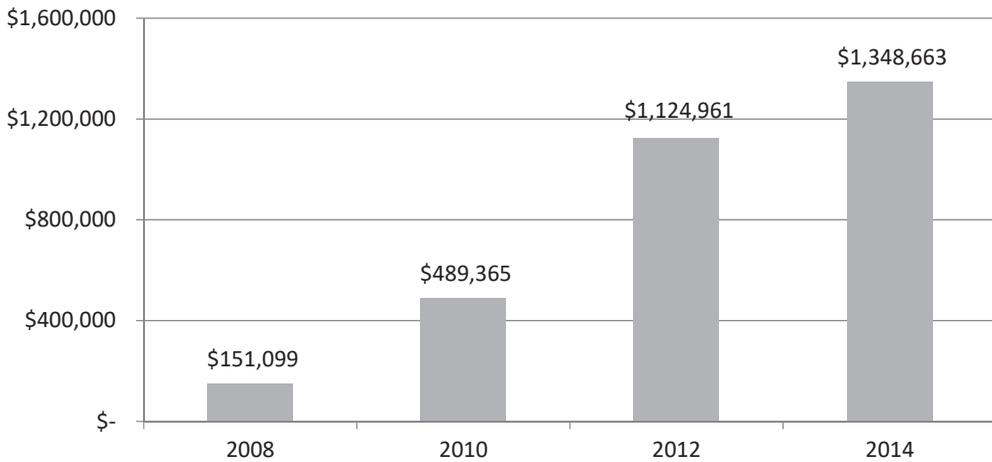


FIGURE 39.5. Amount of SRTC for businesses, 2008–2014.

### *SRTC for Businesses/Employers*

This refundable tax credit is available to businesses that donate money to a child care center, maintain and operate a center, or subsidize child care for their employees. The amount of the tax credit is tied to the quality rating of the facility and ranges from 5 to 20% of eligible expenses. This credit is also available for businesses that donate directly to Child Care Resource and Referral (CCR&R) entities, up to \$5,000. This refundable credit is designed to provide support to CCR&Rs, which are a valuable resource to parents and providers and can be instrumental in helping to create quality child care.

Figure 39.5 shows that the credits to businesses have grown from \$151,000 in 2008 to more than \$1.3 million in 2014. Participation has grown from 168 businesses in 2008 to more than 450 businesses.

Overall, the impact of these credits, now more than \$17 million in 2014 and in 2015, and a total of over \$100 million since inception, has been a critical lifeline for the child care sector in Louisiana as it strives to improve quality, especially during a time of budget cuts and reduced eligibility in the state subsidy program.

### *Impact of the SRTC on Quality Care*

While the financial benefits of the SRTC are vital to the viability of the child care sector, the greater benefits are achieved by increasing the quality of available child care and even more

importantly, improving access to this higher quality for more vulnerable children. The first step is getting centers to participate in Louisiana’s rating system. Shortly after the system started, and just after the SRTC came into effect in 2008, approximately 484 centers participated and had achieved at least one star. By 2016, this had increased to 801 centers.

More important than the number of centers participating is the quality of those centers. In 2009, only 6% of participating centers had a rating of three or more stars (the system was designed so that “quality” care was achieved at the three-star level, out of a total of five stars). In 2016, the number of centers achieving at least three stars had increased eightfold, and 70% of participating centers overall were at two stars or higher.

Figure 39.6 shows the participation and quality level of all eligible licensed centers in Louisiana. Zero stars indicates centers that are not participating in the system.

But the true success of the system was moving more vulnerable children into quality care. Based on data kept by the Louisiana Department of Education, the percentage of children who receive CCAP or foster care and were enrolled in child care centers with a rating of three or more stars increased from 21 to 46% from 2009 to 2016 (see Figure 39.7). The National Women’s Law Center examined the SRTC in a report released in 2015 and attributed the success of improved access to quality

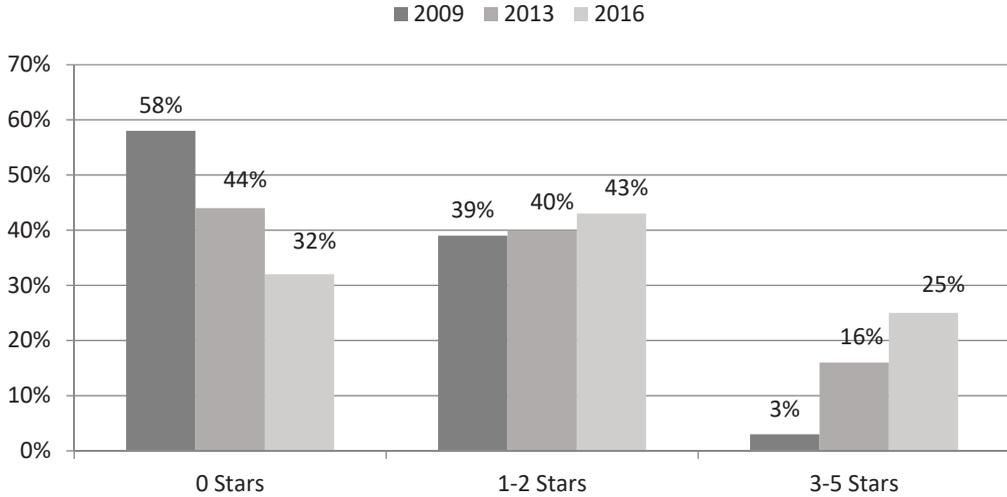


FIGURE 39.6. Participation of licensed child care centers, 2009, 2013, and 2016.

care for these children as being due to the impact of the tax credits (Campbell, Entmacher, Blank & Matsui, 2015).

Furthermore, the SRTC has led to a huge increase in the percentage of child care teachers and directors achieving the Level 1 credential in the Louisiana system, going from 963 in 2008 to 3,598 in 2015, a 274% increase. An even larger increase was observed at the higher levels, as Level 2 up through the “Master Teacher” level saw an eightfold increase, from 284 to 2,255 during this time (see Figure 39.8).

**Conclusions**

The Organization for Economic Cooperation and Development comprises 35 member countries that are primarily high-income economies, or developed countries. Looking across the member countries helps put into context the size of the investment the United States makes in supporting early childhood development. For example, the United States spends less than 0.3% of its gross domestic product (GDP) on early childhood education and child care. This

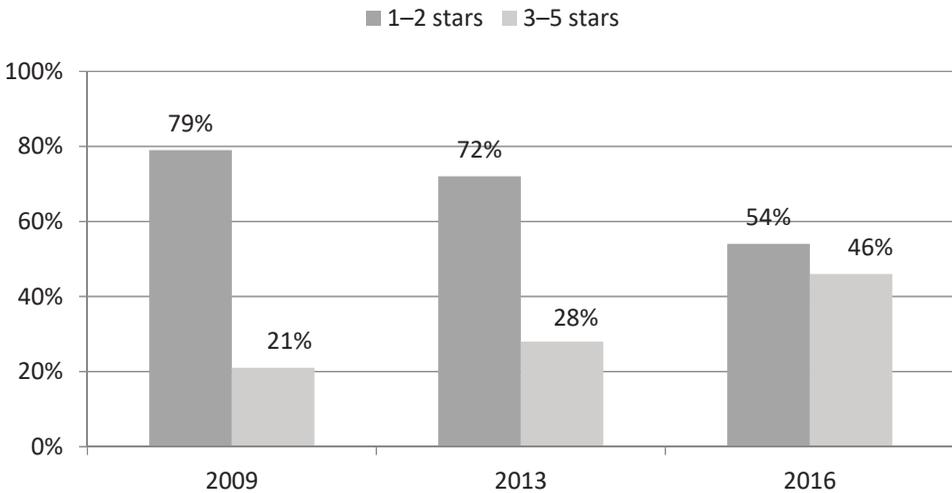


FIGURE 39.7. Percentage of subsidized children in quality child care, 2009, 2013, and 2016.

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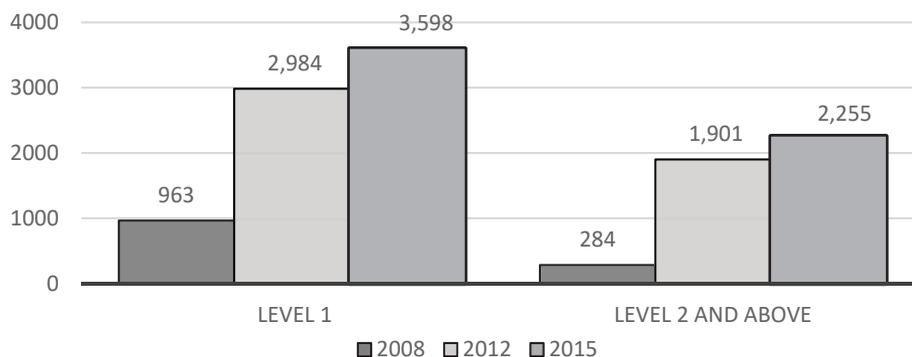


FIGURE 39.8. Number of teachers/directors by professional level, 2008, 2012, and 2015.

compares to eight member countries that spend 1% or more, led by Iceland and Sweden at 1.8 and 1.6% of GDP, respectively. Only five countries spend less than 0.5% of GDP, and only Turkey, at 0.2%, spends less than the United States (Organization for Economic Cooperation and Development, 2016).

The member countries spend on average \$4,300 per child on early education and child care. However, this average figure fails to express the wide range of spending between countries. Two countries, Luxembourg and Norway, spend in excess of \$11,000; Sweden, Denmark, and Iceland spend more than \$9,000; and six countries spend less than \$2,000, including Portugal, Poland, Estonia, Chile, Mexico, and Turkey. The United States comes in at approximately \$2,400 per child, ranking 21st (Organization for Economic Cooperation and Development, 2016).

This lack of investment defies the research base that has shown for many years the benefits of investing in early childhood development. Researchers continue to examine these benefits and the most recent findings, described in this chapter, inform us that the greatest benefits occur when the interventions begin as early as possible in a child's life. Furthermore, there is now evidence that there can be a spillover effect, so that when these early childhood programs are appropriately brought to scale, even children who did not directly receive the program benefit as well. Whether trying to achieve child outcomes, or return on investment, it is clear that investment in early childhood programs is a win for the child, a win for the family, and a win for the greater society. All that is left to do now is make the needed investments

in early childhood development and infant mental health.

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