

PROMOTING EFFICIENCY AND QUALITY IN THE CHILD CARE MARKET:

# The Return on Investment of the Early Learning Ventures Shared Services Model

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STRONGER  
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## **About Early Learning Ventures:**

Early Learning Ventures<sup>SM</sup> is a Colorado-based not-for-profit organization, founded by the David and Laura Merage Foundation, dedicated to expanding access to quality child care. The first five years of a child's life are the most critical for charting a course for lifelong success. Therefore, it is essential that parents have access to child care that is provided in a high-quality educational setting. Early Learning Ventures (ELV) is building a network of shared services organizations, ELV Alliances, to streamline the often difficult and diverse tasks of running a small, independent child care business and make managing a financially stable, high-quality business attainable. Through an online, cost-effective operations platform that combines tasks such as accounting, billing, licensing requirements, and program administration into a central portal, providers are able to manage their business more efficiently, leaving them with more time and money to do what they do best: provide quality care for children.

## **About Development Research Partners:**

Development Research Partners specializes in economic research and analysis for local and state government and private-sector businesses. Founded in 1994 in Jefferson County, Colorado, Development Research Partners provides clients with reliable consulting services in four areas of expertise: economic and demographic research, industry and workforce studies, fiscal and economic impact analysis, and real estate economics.

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# EXECUTIVE SUMMARY

The Early Learning Ventures (ELV) Alliance model is a non-regulatory intervention designed to improve the efficiency of state child care markets. Strong nonprofit organizations are selected to start Alliances, and in turn they create networks of center-based and family child care providers, or Affiliates. The Alliances share business services and take advantage of bulk purchasing agreements available through the ELV platform. For a fee, providers in the Alliance can receive one of three levels of service ranging from access to a shared services web platform for bulk purchasing (Tier I) to a comprehensive set of enrollment, billing, and other business services (Tier III). The model is currently being taken to scale in Colorado where, like most states, market-based child care providers are particularly sensitive to the increased costs associated with providing higher quality care, and do not benefit from the operational efficiencies that would result from achieving an economy of scale. Accordingly, the ELV Alliance model attempts to create greater operational efficiencies among smaller providers to allow them to provide higher quality care at lower cost. These efficiencies help the model achieve its ultimate goal of promoting higher quality, market-based child care that promotes child well-being and school readiness.

The fundamental assumption of the ELV Alliance model is that the operational efficiencies and economies of scale created by an Alliance network allow child care providers to offer higher quality care at a lower cost. The first step in testing this assumption is to analyze the extent to which the money invested in the model produces a return that is greater than the original investment. To do this, ELV contracted with Development Research Partners to conduct a return on investment (ROI) study. The research team analyzed the value of the efficiencies created by participation in an Alliance network, and the returns gained at the Alliance and child care provider level. Using assumptions derived from current implementation of the model in Colorado, the team estimated the average rate of return separately for family child care homes and center-based providers for each tier of service.

## Findings

Table 1 provides the return on investment results. For family child care home providers, the costs of participating in the model—fees, training, participation in a quality rating improvement system (QRIS), and other costs—are more than offset by the direct and indirect benefits produced by Tier I and Tier II services. The return on investment from both direct and indirect benefits is \$0.35 per dollar for a family child care home receiving Tier I services and \$0.04 for a family child care home receiving Tier II services. This means that providers receiving Tier I or Tier II services receive an additional \$0.35 and \$0.04 in value for every dollar they invest in the ELV Alliance model, respectively. The initial investment of the family child care home receiving Tier I services is paid off in less than a year (0.9 years), with it taking longer for providers receiving Tier II services (2.5 years). After five years, the total return is \$1,270 for a family child care provider receiving Tier I services and \$270 for a provider receiving Tier II services. A family child care home receiving Tier III services, which includes the more expensive billing services, does not realize a benefit high enough to cover the on-going costs and fees.

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	Tier I	Tier II	Tier III
<b>Family Child Care Home</b>			
Years to Payback	0.9	2.5	NA
Direct ROI per Dollar Over Five Years	(\$0.73)	(\$0.84)	(\$0.85)
Total Direct and Indirect ROI per Dollar Over Five Years	\$0.35	\$0.04	(\$0.10)
Total Net Return Over Five Years	\$1,270	\$270	(\$1,660)
<b>Child Care Center</b>			
Years to Payback	0.2	0.2	0.6
Direct ROI per Dollar Over Five Years	\$4.13	\$2.22	(\$0.63)
Total Direct and Indirect ROI per Dollar Over Five Years	\$8.08	\$6.17	\$0.61
Total Net Return Over Five Years	\$83,800	\$114,400	\$99,100

The returns for child care centers in the Alliance network are considerably larger. The direct and indirect return on investment is \$8.08 for a child care center receiving Tier I services, \$6.17 for a center receiving Tier II services, and \$0.61 for a center receiving Tier III services. Child care centers receiving Tier I and II services will pay back their costs of participation in the ELV Alliance model in about 0.2 years, while a center-based provider receiving Tier III services will take a little over half a year (0.6 years). After five years in an ELV Alliance, a Tier I child care center will have received \$83,800 more in direct and indirect benefits than what they paid to participate. A Tier II child care center will have received \$114,400 more and a Tier III child care center will have received \$99,100.

In addition to the providers, the analysis indicates that the ELV Alliance also realizes an on-going annual return. The return is based on the fee revenues collected from Affiliate providers, less the costs of operations and staff needed to provide ELV Alliance services. Child care centers provide a higher percentage of the Alliance's return compared with family child care homes. These returns are important to the model because they help to attract high-quality organizations to act as Alliances, and also assist with the sustainability of the model.

## Conclusion

The results of the return on investment analysis indicate that the ELV Alliance model produces significant returns for participating providers. These returns are strongest among center-based providers and are significant, albeit smaller, for Tier I and Tier II family child care home providers. As such, participation in the ELV Alliance model provides operational efficiencies that allow providers to offer care at a lower cost to them. This indicates that the ELV Alliance model makes the operation of a small child care business more efficient and sustainable and provides the opportunity for providers to offer higher quality care.

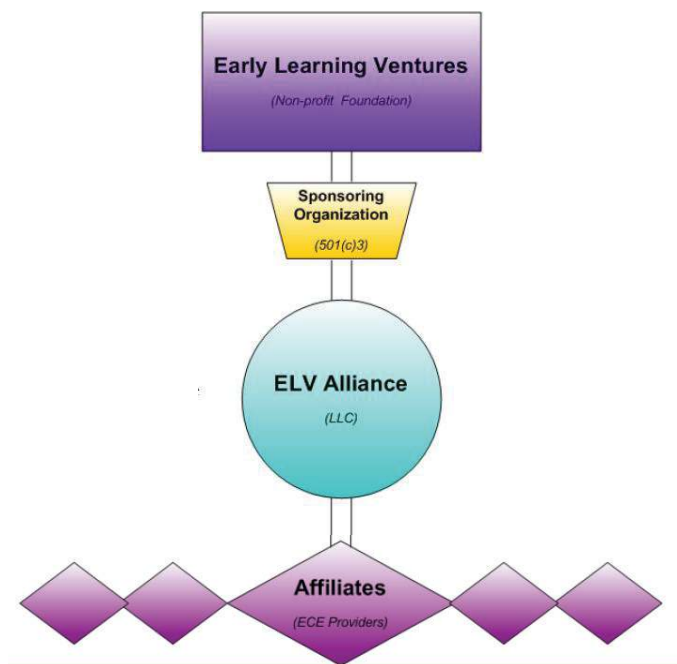
# INTRODUCTION

For the past several years, Early Learning Ventures (ELV), a nonprofit organization founded through the David and Laura Merage Foundation, has endeavored to bring a shared services business model to child care centers and family child care homes in the state. The shared services framework assists early childhood care and education providers to overcome many of the challenges they face as small businesses, potentially enabling them to raise the quality of care they offer.

Indeed, most child care providers are small businesses employing 20 or fewer workers.<sup>1</sup> Challenges faced by the small child care provider include finding the time and expertise to complete accounting, billing, licensing, procurement, and training. In addition, child care providers often lack business experience, professional networks, economies of scale, and sustainable business models, all of which create additional costs for the business. As providers get overwhelmed by the “business of doing business,” their businesses suffer. These challenges can hurt the long-term viability of a provider and may hinder the provider from improving the quality and expanding the accessibility of their programs.

## The Early Learning Ventures Alliance Model

ELV created the ELV Alliance model to implement shared services in the child care industry and to create efficiencies in businesses providing child care services. As a result of the gains in efficiency, providers should be able to devote more resources to raising the quality of the care offered. An ELV Alliance network is comprised of a group of child care providers, including both child care centers and family child care homes, who share a bundle of business services and resources. The collaboration between the providers, or ELV Alliance Affiliates, is possible through a sponsoring organization that establishes the ELV Alliance for the providers. The ELV



<sup>1</sup> For a more detailed analysis of the inefficiencies in the early childhood education industry, the challenges providers face, and the benefits of raising the level of quality in the industry, reference - Stoney, Louise, *Shared Services: A New Business Model to Support Scale and Sustainability in Early Care and Education*, (Early Learning Ventures, 2009), <http://www.earlylearningventures.org/Shared-Services/Shared-Services-Toolkit/Shared-Services-101.aspx>.

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Alliance, with the support and guidance of ELV, provides the array of shared services and resources for the ELV Alliance Affiliates.

ELV's shared services model is comprised of nine service areas which are administered through the ELV Alliance. The following is a brief description of each service area.

## ELV Platform Access

The ELV Platform, produced by ELV, includes several services. The first is a virtual business infrastructure for the child care business. This includes curriculum templates, employee and parent handbooks, human resources policies and procedures, marketing tools and mailing templates, and online training modules. Each of the training modules were developed and customized by ELV for Colorado businesses and are compliant with state child care licensing regulations. ELV Alliance Affiliates also get access to group purchasing discounts through an ELV contract with CCA Global as part of the ELV Platform. CCA Global collaborates with clients in nine states and many large businesses to pre-negotiate discounted prices for supplies and business services for its members. Participation in an Alliance allows an Affiliate to access these rates.

## Technical Assistance

Membership in an ELV Alliance network gives the Affiliate access to the expertise and technical assistance of the ELV Alliance staff. The ELV Alliances are well established organizations with strong experience in the child care industry. The staff is generally comprised of a program manager, an account coordinator, and one or more billing specialists. These persons can help the Affiliate integrate the ELV service platforms into their operations, help them streamline their operations, and give them access to a large network of child care organizations.

## Training Opportunities

The ELV Alliances regularly hold training classes for their Affiliates. These training classes may include ways to better implement the ELV Alliance service platforms into their businesses or include quality training that qualifies for the state's mandated staff training. Colorado requires the staff of a child care center to complete a minimum of 15 clock hours of training each year. Training classes are also an opportunity for ELV Alliance Affiliates to network with each other.

## CORE Access

Alliance CORE, developed by ELV, is the premier web application that provides the foundation and technical synergy between shared services management and child care businesses. The concept of a central management and support tool that allows child care centers and family providers to maintain their local autonomy is the key to a successful shared services business model. CORE allows for the optimization of the independent operations of child care centers and family providers by centralizing record management and reporting, streamlining licensing and regulation compliance, and enrollment and billing services for private pay tuition and subsidy programs. ELV has created a public-private partnership with the Colorado Office of Early Childhood, Division of Early Care and Learning that allows licensing specialists from the state to examine all child care centers or family child care providers data before arriving on-site, saving both time and resources at the state and child care provider level.

## Licensing Specialist

Colorado requires child care centers and family child care homes to be licensed by the state. Colorado employs about 30 licensing specialists who conduct on-site visits and review provider documents in order to license qualified providers. In 2010, the Colorado Department of Human Services, Office of Early Childhood, Division of

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Early Care and Learning piloted a licensing specialist system with ELV. Both parties recognized the need for a more cohesive system at both the state and provider levels. A challenge the state has in licensing is the often hodgepodge systems child care providers use to keep track of children, staff, and operations. A state licensing specialist often has to spend considerable time sorting documents and learning the procedures of each individual center and family child care home. At the provider level, the more time a state licensing specialist has to take to review their operations, the more of an intrusion it is on the care and operations of the business.

Through a partnership with the state, each ELV Alliance network is assigned one of the state's licensing specialists. This licensing specialist can access the records of the Affiliates who use CORE prior to an on-site visit which saves time, increases efficiency, and allows the specialist more time for on-site program building with the Affiliates. Another advantage of CORE is that the state licensing specialist can gain familiarity with a uniform set of documents and records between an ELV Alliance's Affiliates.

## **Food Program Support**

An ELV Alliance can help Affiliates access the Child Adult Care Food Program (CACFP). Additionally, ELV is able to negotiate a discounted vended meal service rate with a central provider that Affiliates can access through their ELV Alliance. CORE can also be utilized for accountability and reporting of administration for the food program.

## **Quality Services**

The ultimate goal of ELV is to improve the quality of care in the child care market. The quality services offered through an ELV Alliance include quality improvement events, training, and financial assistance for independent quality rating improvement systems (QRIS). Involvement in a network of child care providers also gives an Affiliate an opportunity to evaluate their level of care compared with the standards at other organizations. A reputation for quality care and a positive quality rating can generate more revenue for the child care provider, potentially helping a child care business attract a higher level of enrollment, more tuition revenue, and in some cases, higher reimbursements from state and federal subsidy programs.

## **Enrollment Services**

It is critical for many child care providers to be close to or maintain full enrollment. ELV Alliance Affiliates have access to the marketing tools and research available through the ELV Platform. The Alliance can also act as the central place for child care references and information for families seeking a child care provider. Many of the organizations that will choose to be an ELV Alliance may already act in this capacity for their region. Some Alliance organizations will be lead organizations for Head Start grants, Colorado Child Care Assistance Program (CCCAP) dollars, and other federal, state, and local funding sources. This capacity could help ELV Alliance Affiliates maintain sustainable enrollment levels.

## **Billing Services**

An ELV Alliance can provide a full range of billing services to its Affiliates. Billing services are possible through the integration of CORE into the operations of the participating Affiliate. Each ELV Alliance employs one or more billing specialists that can act as intermediaries between tuition payers and the child care provider. A child care provider's revenue can come from many sources including tuition, CCCAP dollars, Head Start, the Colorado Preschool Program (CPKP), fundraising, food programs, and other state and local sources. The billing process can be complicated if the child care provider serves children in several geographic areas. For instance, CCCAP funding is determined at a county level for its residents with varying payment rates and eligibility requirements.

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Access to a billing specialist through an ELV Alliance can remove the burden of being an expert in each of these areas from the Affiliate. Billing services also help with the financial viability of an Affiliate organization. Late or defaulted payments can mean the difference between survival and closure for a child care business. An ELV Alliance can help relieve some of the risk involved with late or default payments.

## **Tier Level Services and Fees**

The services offered through an ELV Alliance can be accessed by Affiliates under three tiers of participation, with each tier representing a higher level of commitment and service. An ELV Alliance can integrate these tiers into their services framework by assessing the needs of their Affiliates as well as the capabilities of their own organization. Tier I includes a basic level of technical assistance from the ELV Alliance, including training opportunities, procurement discounts, and access to a wide variety of web-based tools and resources included in the ELV Platform. Tier II adds to the Tier I services through access to the customized child care management software platform called CORE. Tier II participants can also opt to have the ELV Alliance act as a food program sponsor for their business. CORE use allows the ELV Alliance to offer a higher level of technical assistance for enrollment, state licensing, and quality improvements to their Affiliates. Tier III is inclusive of the other Tier levels, and adds comprehensive billing services for the Affiliate.

**Table 2. ELV Alliance Services and Tiers**

Service	Tier I	Tier II	Tier III
ELV Platform Access	Included	Included	Included
Technical Assistance	Included	Included	Included
Training Opportunities	Included	Included	Included
CORE Access		Included	Included
Licensing Specialist		Included	Included
Food Program Support		Included	Included
Quality Services		Included	Included
Enrollment Services		Included	Included
Billing Services			Included

*Source: Early Learning Ventures*

A fully operational and sustainable ELV Alliance will charge fees to the Affiliates based on the tier level of service. These fees will help the Alliance organization cover their fixed costs for infrastructure and staff.

## **The ELV Alliances and Sponsoring Organizations**

Please note: Since the initiation of this study, ELV has expanded in Colorado to now include six ELV Alliances with new names and regional coverage models. The information contained in this study reflects the correct and accurate Alliance names and data relevant to the date information was collected.

ELV's work in shared services has culminated in the formation of four ELV Alliances in the state. The four ELV Alliances include the ELV Alliance @ ACECC in Centennial, ELV Alliance of the Pikes Peak Region in Colorado Springs, the Early Childhood Options Alliance in Dillon, and the Bal Swan Alliance in Broomfield. Each of these Alliances is part of an existing child care organization that includes Arapahoe County Early Childhood Council (ACECC), Early Connections Learning Centers (ECLC), Early Childhood Options (ECO),

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and Bal Swan. All of these organizations are nonprofit entities that have expanded their missions in the community to include the role of an ELV Alliance. The following is a brief description of each organization.

## **ELV Alliance @ ACECC - Arapahoe County Early Childhood Council (ACECC)**

Colorado authorized the formation of early childhood councils through legislation passed in 2007. The formation of early childhood councils was part of the Colorado Department of Human Services' Quality Initiatives program.<sup>2</sup> The councils were implemented to improve the accessibility and quality of early childhood services for children and families in the state. Rather than provide direct services, the councils form partnerships within a community to address challenges to accessibility and quality of child care. The role of an Alliance fit into ACECC's mission and goals.

ACECC was one of the first ELV Alliance organizations, piloting the full shared services model for ELV. ELV Alliance @ ACECC started its Alliance in 2009 and had about 44 Affiliates including 37 child care centers and seven family child care homes. Recently, the Alliance operations were transferred to another organization. However, at the time of the transition, ELV Alliance @ ACECC Affiliates had a licensed capacity of over 2,800 children. ELV Alliance @ ACECC offered a full range of ELV Alliance services to Affiliates in Arapahoe and Denver Counties from the ELV Platform to billing services for six child care centers and one family child care home. ELV Alliance @ ACECC pioneered the tiered services approach for ELV, the implementation of Affiliate fees, billing services, and other aspects of the current ELV Alliance model.

## **ELV Alliance of the Pikes Peak Region - Early Connections Learning Centers (ECLC)**

ECLC, established in 1897 in Colorado Springs, is the oldest nonprofit child care organization in Colorado. ECLC runs eight of its own child care centers, four of which are nationally accredited by the National Association for the Education of Young Children (NAEYC). ECLC serves children from six weeks to 13 years old, including before and after school programs and bus services, among other things. ECLC is a leader and advocate for child care in the Pikes Peak region.

ECLC was ELV's first Alliance organization. ELV approached ECLC in 2007, and an informal agreement was reached in the spring of 2008 for ECLC to be the first ELV Alliance. The relationship was formalized in February 2009. ECLC was a good candidate based on the strengths of its existing organization, as ECLC already centralized many of the services offered through an ELV Alliance for its own centers. ECLC had also taken the lead role in the region for Head Start program dollars, partnered with the Colorado Springs School District to support the Colorado Preschool Program, and offered accreditation facilitation services for child care providers throughout El Paso County.

ECLC expanded its network through the ELV Alliance model. ECLC now serves 12 additional child care centers and 17 family child care homes through its role as an Alliance. The ELV Alliance of the Pikes Peak Region has a total licensed capacity of over 1,500 children. Under the ELV Alliance framework, ECLC has also expanded the range of shared services it provides to include centralized enrollment, billing, and other services.

## **Early Childhood Options (ECO) Alliance**

Located in Dillon, Colorado within Summit County, ECO originated as a child care resource and referral (CCR&R) agency serving Summit, Grand, and Lake Counties. ECO is currently part of Qualistar Colorado's network of 17 resource and referral agencies in the state. The mission of CCR&R agencies is to provide quality

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<sup>2</sup> For more information visit the Colorado Department of Human Services website, <http://www.colorado.gov/cs/Satellite/CDHS-ChildYouthFam/CBON/1251583639456>, accessed April 2012.

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ratings to participating child care organizations, provide referrals to child care providers, and distribute information on child care in the region to parents, providers, and other interested parties. Since 1991, ECO's role in the Summit County region has grown to include the formation of the Rural Resort Region Northeast Division Early Childhood Council (RRR-NE), managing and administering the Head Start program in the region, and becoming an ELV Alliance.

ECO's experience as an ELV Alliance started in late 2010. ECO currently has four Affiliate child care centers consisting of Summit County Preschool, Lake Dillon Preschool, Little Red Schoolhouse, and Carriage House with a combined capacity of about 280 kids. ECO's Affiliates serve children from about 6 weeks old through six years. Despite ECO's short history as an Alliance, it has been able to benefit its Affiliates greatly through billing services, technical assistance to establish the CORE platform in its centers, food services, procurement, and quality ratings assistance. ECO plans to expand to 30 Affiliates within the next few years, including both child care centers and family child care homes.

## **Bal Swan Alliance**

Bal Swan is an established preschool center in Broomfield, Colorado formed in 1963. Originally formed to serve children with disabilities, Bal Swan expanded its role to all preschool children in the early 1970s. Bal Swan continues to offer integrated early childhood education and preschool services to both children with disabilities and other preschoolers. Bal Swan has formed partnerships over the years with organizations such as the North Metro Community Center Board, Imagine, the Adams County School District, and the Boulder Valley School District. Bal Swan serves over 350 full- and part-time children at its center.

Bal Swan is new to the ELV Alliance framework. Bal Swan started integrating ELV's shared services tools and resources into its organization in 2010. Bal Swan currently has four Affiliates comprised of three child care centers and one family child care home. Bal Swan has helped its Affiliates integrate the CORE platform into their operations and has assisted them in accessing the ELV Platform, including discounted procurement of goods and services.

## **Intent of the Study**

The goal of ELV is to create a sustainable system of shared services. Sustainable ELV Alliances start with cost savings and efficiencies achieved at the Affiliate level such that Affiliates are able to pay a monthly service fee to the ELV Alliance with the dollars saved. The cost savings and efficiencies the Affiliates achieve will increase the quality and viability of their business. The Alliances receive fee revenues from their Affiliates to help them cover the costs of staff and infrastructure to support the ELV Alliance services. Ideally, the services the ELV Alliance provides will cost less than it would cost the Affiliates to supply on their own as the ELV Alliance benefits from economies of scale.

Part of the cost of infrastructure for an ELV Alliance will be covered through ELV's services and support. Sustainability of the shared services system is achieved when ELV is able to supply the various services through an annual fee to each ELV Alliance to help ELV cover the costs of its staff and infrastructure. Through the economies of scale achieved at all levels (ELV, ELV Alliance, and Affiliate), the ultimate goal is to provide better quality child care and education.

The intent of this study is to estimate the value of the efficiencies allowed through the ELV Alliance model and to analyze the returns gained at the Affiliate and ELV Alliance organizational levels. This analysis focuses on the returns associated with a fully operational ELV Alliance. This is accomplished through an analysis of the "real-world" savings and benefits experienced by the four existing ELV Alliances. In preparation for the launch of the

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ELV Alliance pilot programs and recruitments, ELV put significant effort into researching the potential benefits of a shared services model. Now that ELV has four fully functioning Alliances, two with several years of experience, ELV is interested in reassessing the potential returns of the shared services model.

## Methodology

Each ELV Alliance is unique in the ways they apply the shared services model. The ELV Alliances are given flexibility in how they implement, market, and support their programs. ELV's services such as CORE are customizable for the individual or regional needs of an Alliance. The ELV Alliance of the Pikes Peak Region is a prime example. ECLC is a well-established program that has implemented its own version of shared services for eight child care centers. ECLC also has resources not all Alliances can offer such as access to their Lending Libraries services, which lends furniture to its Tier II Affiliates. ELV Alliance of the Pikes Peak Region has been able to organize their service tier levels and program offerings to meet the capabilities and needs of ECLC and their Affiliates.

The return on investment for each ELV Alliance varies depending on their utilization of the platforms, types of Affiliates they attract, and the services they offer. To overcome the variability between the ELV Alliances, the returns in this study were analyzed as if each ELV Alliance had uniform program offerings without regional and organizational variations, and with a uniform number of family child care home and child care center Affiliates. The study quantifies the potential returns to an ELV Alliance network operating under similar conditions.

The costs, benefits, and returns in this study are based on two general assumptions. First, it is assumed that the typical family child care home and the child care center Affiliates are taking full advantage of the services offered through ELV and the Alliance. In practice, if an Affiliate organization does not to participate in one or more of the service areas, they will not receive the benefit of that service, and their return may be lower than what is estimated in the study. The second basic assumption is that the Affiliates need and value the services that are provided. For example, if an Affiliate utilizes a retailer that offers a lower price on supplies than what is offered through the ELV Platform, the Affiliate will not find value or benefit from the discounts estimated in this study.

The returns estimated in this study include the returns for a typical family child care home, a typical child care center, and a typical ELV Alliance operating at its capacity level of Affiliates and children. The returns for a family child care home and a child care center are estimated for each tier level of participation. The typical ELV Alliance is assumed to have a total licensed capacity among all of its Affiliates of 4,960 and is comprised of 20 family child care homes and 60 child care centers. The typical ELV Alliance is assumed to operate none of its own child care centers in that its staff and services are exclusive to the ELV Alliance.

Family child care home businesses are limited by state licensing requirements. A family child care home is limited to care for six children from birth to 13 years of age with no more than two children under two years of age plus two additional school age children attending full-day school. A family child care home is operated by a self-employed individual. For this study, a typical family child care home is assumed to have a licensed capacity of eight with six full-time equivalent (FTE) children and is owner-operated. The family child care home is also assumed to be an existing business when it joins an ELV Alliance. A family child care home startup business may experience returns greater than described in this analysis.

Child care centers are classified by state licensing requirements as either large or small. A small center is limited to a maximum of 15 children. Large centers care for 16 or more children. For this analysis, a typical child care center is assumed to be large with a licensed capacity of 80 children. This estimate matches closely with the average capacities of centers participating in the four current ELV Alliances. As average enrollment at centers in

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the Alliances is about 90 percent of capacity, the estimated enrollment for a typical child care center is 72 full-time equivalent (FTE) children. Like the typical family child care home, the child care center model used for this analysis is assumed to be an existing business that is fully operating at the time it joins an ELV Alliance. The ELV shared services model may yield greater returns to new child care centers due to reduced startup costs, but this is not included in this analysis.

A typical ELV Alliance starts its operations with 2.5 FTE employees including one program manager, one account coordinator, and 0.5 FTE billing specialists. Once the ELV Alliance's operations have a sustainable level of children and Affiliates in the Alliance network, the Alliance will employ an estimated six FTE employees including one program manager, one account coordinator, three billing specialists, and one ELV Alliance coach.

The returns for an ELV Alliance Affiliate are different than those calculated for the ELV Alliance. An Affiliate is assumed to integrate the platforms and shared services into their existing organization with existing staff. The ELV Alliance has to adjust its organization and level of staff based on their ability to recruit Affiliates and provide an appropriate level of services. The tier structure allows each Affiliate to choose the level of services they would like.

## Report Organization

The first section of the report details the investments and the returns at an Affiliate level. This includes an analysis of a family child care home and a large child care center. The Affiliate returns are further divided into direct returns, indirect returns, and return on investment. Returns on investment (ROI) are calculated based on three tier levels of participation.

Section two of the report highlights the on-going costs, benefits, and returns of a typical ELV Alliance. The section outlines estimated revenues from Affiliate fees paid to the organization for shared services and the estimated expenses to provide services to those Affiliates.

Following the report summary are three appendices. Appendix I provides detailed costs, benefits, and returns data used to develop the family child care home and child care center analyses. Appendix II provides a review of the assumptions and calculations used to estimate the ROI. Appendix III summarizes the literature and studies that were reviewed for this analysis. These studies provided context for estimating the expected returns of the shared services model. In addition, various studies were reviewed that attempt to measure the returns to society of quality early childhood care and education. These societal benefits, which may be large, are not included in this analysis.

# RETURN ON INVESTMENT: AFFILIATES

The return on investment (ROI) for an ELV Alliance Affiliate differs according to whether the Affiliate is a family child care home or a child care center. Each type of provider has different needs, budgets, and resources. The returns to an Affiliate are estimated based on the type of provider for each tier level of participation.

The ROI is based on the costs and benefits of ELV Alliance membership. The costs and benefits build on each other as more ELV Alliance services are added and systems are integrated. The ROI includes the value of initial costs and benefits, defined as the costs and benefits accrued during the first year of Alliance involvement, and the value of on-going annual costs and benefits. The ROI is calculated based on five years of operating under the ELV Alliance framework. There is only a return on investment if the initial and on-going benefits exceed the total amount of costs over five years.

Benefits are divided into direct and indirect benefits. Direct benefits include direct cost savings or revenue increases for the business. For example, a 20 percent discount on school supplies represents a direct cost saving.

Indirect benefits are those benefits that indirectly influence a company's balance sheet. Indirect benefits include things such as time savings, training opportunities, and opportunity costs. For example, if a child care provider streamlines its operations with the ELV Alliance services, thereby increasing worker productivity and reducing the time spent internally on those services, a business may not directly experience an improvement in its bottom line through reduced costs or increased revenues. However, this time savings may translate into increased quality, an increase in enrollment, and improved parental satisfaction, among other things, as the provider is able to devote more time to increasing care quality rather than business operations.

## Family Child Care Home

There are approximately 4,300 licensed family child care home providers in Colorado.<sup>3</sup> The family child care home is usually run from the owner's home and the owner-operator of a family child care home usually has a personal relationship with all of the parents and children for whom they provide services. As a self-employed person, the owner of a family child care home is responsible for providing all the records management, operating materials, school supplies, compliance costs, food, and other costs inherent in operating a small business. A family child care home can benefit from the ELV Alliance services by accessing a wealth of business support materials and technical assistance, and by accessing a network of other child care providers.

The current ELV Alliances include about 25 family child care home providers. The costs of becoming an ELV Alliance Affiliate include investments in training, an investment in a quality rating improvement system, and the fees paid to the ELV Alliance for its services. The benefits include discounts and cost savings for materials and services, streamlined child management and business operations through CORE, time savings associated with streamlined operations, the value of the business services and support received through the ELV Alliance, and the savings over other commercially available tools and resources.

## Costs or Investment

- ◆ **Training Costs:** The transition to the ELV Platform and model requires the family child care home business owner to receive training in the various platforms and services. The training required for Tier I services is minimal and includes an introduction to the ELV Platform. This usually requires a single one-hour initial training session and then a few additional trainings throughout the year to highlight different uses of the ELV Platform.

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<sup>3</sup> Colorado Department of Human Services, Division of Early Care and Learning, Statistics and Reports, <http://www.colorado.gov/cs/Satellite/CDHS-ChildYouthFam/CBON/1251586020485>

# RETURN ON INVESTMENT: AFFILIATES

Tier II and Tier III Affiliates generally need additional training in the use of CORE. The initial CORE training usually takes between three and four hours for a family child care home provider. CORE users will typically receive additional monthly trainings as needed. The family child care home can reduce their training time as they get more familiar with the ELV Platform and CORE. However, training will always be available to the Affiliates and will likely be utilized a few times each year.

The cost of training for the family child care home provider is equal to the value of their time per hour, about \$19.13 per hour.<sup>4</sup> The total combined cost of initial trainings in the ELV service areas ranges from \$130 to \$240 with an on-going annual cost ranging from \$110 to \$170, depending upon the provider's tier level.

- ◆ **Quality Rating Improvement System:** Membership in an ELV Alliance requires the Tier II and III Affiliates to participate in a QRIS. A quality rating may cost up to \$1,000 for a family child care home and in many cases needs to be updated every other year. However, the family child care home does not bear the burden of the entire cost. The cost to the family child care home will likely be about 10 percent of the total cost with the other 90 percent contributed through an ELV Alliance. The initial cost of the quality rating is an estimated \$100 with an on-going annualized cost of about \$50 each year. The provider will often make some quality improvements in conjunction with their quality rating. However, the costs of improving a quality rating are not included in this analysis; the analysis only includes the base fee for obtaining the rating.
- ◆ **Affiliate Fees:** The monthly fees required for joining an ELV Alliance are a cost for an Affiliate. The fee ranges from \$50 per month for a Tier I family child care home to a base fee of \$100 per month for Tier II and Tier III family child care home providers. Tier III Affiliates also pay an additional five percent based on the cost of billed items. For a family child care home with six FTE children, annual fees will range from \$600 per year for Tier I services to \$3,260 per year for Tier III services based on about \$41,220 of billing.

## Direct Benefits

- ◆ **Discount Purchases:** The ELV Platform offers direct benefits through discounted materials and service costs. CCA Global develops custom business support tools and materials as well as negotiates bulk purchasing discounts on behalf of its members. The direct benefits from the ELV Platform are modest for a family child care home with a small budget. The largest benefits are through the discount school supply platform that offers a 20 percent discount on purchases. Other direct cost savings are through the office supplies, janitorial and kitchen supplies, and sanitary gloves, among other things. A typical family child care home provider does not realize the full discount of these other platforms due to limited needs for some products that put them below the minimum purchase threshold. The benefits over the first year were discounted by 50 percent to account for the gradual implementation and utilization of the ELV Platform services. The estimated direct benefit is about \$110 in the first year with an on-going annual benefit of about \$220.
- ◆ **Tier II Direct Benefits:** Tier II services bring an additional direct benefit to the family child care home business. A switch to CORE includes a computer used to manage child records and log children in and out each day. ELV values the computer at about \$200. The computer is a one-time benefit for the provider.
- ◆ **Billing Services:** Billing services provided by the ELV Alliance result in direct benefits for a family child care home, as measured by a reduction in internal billing costs. The direct cost savings from these services is

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<sup>4</sup> The value of the family child care home provider's time is calculated by determining the difference between tuition revenue and program costs for a typical family child care home business. The difference is the income the provider makes and this amount is divided by 2,080 hours of work per year to calculate their income per hour.

# RETURN ON INVESTMENT: AFFILIATES

an estimated \$150 in the first year with an on-going annual benefit of about \$300. The benefits were discounted in the first year by 50 percent to account for the gradual implementation of the services.

## Indirect Benefits

- ◆ **Productivity and Time Savings:** The ELV service areas provide indirect benefits through increased productivity and time savings. The ELV Platform provides a one-stop resource for business materials and services. Time savings through the ELV Platform are also a result of the efficiencies gained from the process of revising business forms and materials. The CORE child management system brings additional time savings to the family child care home through improved records management, improved bookkeeping, and improved parent-provider interactions. Billing services provided through an ELV Alliance reduce the time spent collecting bills, managing bad debt, and sending invoices. The indirect benefits from time savings through the ELV service areas ranges from about \$40 to \$380 in the first year with an on-going annual benefit from about \$80 to \$770, depending upon the provider's tier level. The benefits were discounted in the first year by 50 percent to account for the gradual implementation of the services.
- ◆ **Value of ELV Alliance Services:** Indirect benefits through the ELV service areas also include the value of the services that are provided by the ELV Alliance that further benefit the provider. This includes the value of the ELV Alliance's technical assistance, training opportunities, quality improvements and QRIS assistance, and billing services that add value to the family child care home without having to be internalized by the provider. The value of the services provided by the ELV Alliance is estimated as the cost to the Alliance to provide the services to their Affiliates. The initial indirect benefits to a family child care home from these activities range from \$320 to \$1,000 with an on-going annual benefit ranging from \$350 to \$1,510, depending upon the provider's tier level.
- ◆ **Indirect Cost Savings:** The final component of the indirect benefits is the cost savings of products and services supplied through the ELV service areas over other alternatives. The ELV Platform includes 12 credit hours of training that qualify for part of the 15 credit hours of continuing education required by the state. The value of this training is the market value of similar training that would be received elsewhere if it was not available through the platform. The value of this cost savings is an estimated \$360 each year.

## Return on Investment

Return on investment (ROI), in general, is the net benefit of an investment divided by the cost of the investment. The general formula is:

$$\text{Return on Investment} = \frac{(\text{Benefit from Investment} - \text{Cost of Investment})}{\text{Cost of Investment}}$$

The intent of this study is to estimate the value of the efficiencies (the returns) achieved through inclusion in the ELV Alliance model. The "return" in this analysis is measured in several different ways:

**Years to Payback:** An estimate as to the number of years to reach the point at which the value of the direct and indirect benefits associated with inclusion in the ELV Alliance are greater than the total cost of inclusion in the ELV Alliance model (including both direct dollars spent as well as the value of time invested in the program). This calculation considers both the initial investment as well as the on-going annual costs.

# RETURN ON INVESTMENT: AFFILIATES

**Direct ROI per Dollar Over Five Years:** This calculation includes only the value of direct benefits, or the value of those benefits that offer direct cost savings or revenue increases for the business, compared to the total initial and annual on-going cost of inclusion in the ELV Alliance. The result is expressed as the total dollars returned per each dollar invested over five years.

**Total Direct & Indirect ROI per Dollar Over Five Years:** This calculation includes the value of direct benefits as well as indirect benefits, or the value of things such as time savings, training opportunities, and indirect cost savings, compared to the total initial and annual on-going cost of inclusion in the ELV Alliance. The result is expressed as the total dollars returned per each dollar invested over five years.

**Total Net Return Over Five Years:** An estimate of the total amount of money (both direct and indirect benefits) saved through inclusion in the ELV Alliance over five years.

- ◆ A typical Tier I family child care home Affiliate will pay back their cost in the ELV Alliance model in about 0.9 years based on the expected benefits available through the ELV Platform, technical assistance, quality improvements, and ELV Alliance training opportunities. The direct return on investment over five years is (\$0.73) per dollar invested in the ELV Alliance services, meaning that membership in the ELV Alliance costs more than the value of the direct benefits received. It is when the value of the indirect benefits is added that inclusion in the ELV Alliance pays off. The direct and indirect return on investment is \$0.35 per dollar, meaning that the provider receives an additional \$0.35 in value for every dollar invested in the ELV Alliance model. After five years of inclusion in the ELV Alliance, a Tier I family child care home will have received \$1,270 more in direct and indirect benefits than what they had paid to participate in the ELV Alliance.
- ◆ A typical Tier II family child care home Affiliate will pay back their cost of participation in the ELV Alliance in about 2.5 years based on the expected benefits available through the ELV Platform, technical assistance, ELV Alliance training opportunities, quality improvements, and productivity and time-savings benefits. The direct return on investment over five years is (\$0.84) per dollar invested in the ELV Alliance. Again, it is when the indirect benefits are added that inclusion in the ELV Alliance pays off, with the direct and indirect returns totaling \$0.04 per dollar. After five years of inclusion in the ELV Alliance, a Tier II family child care home will have received \$270 more in direct and indirect benefits than what they had paid to participate in the ELV Alliance.
- ◆ Based on the current services framework, the returns are negative for a typical Tier III family child care home. Billing is generally a small cost to a typical provider and the benefits are less than the five percent additional fee for billing services. The direct return on investment over five years is (\$0.85) for every one dollar invested in the ELV Alliance. The direct and indirect returns total (\$0.10). After five years of inclusion in the ELV Alliance model, a Tier III family child care home will have a loss of about \$1,660.
- ◆ These returns and payback assume similar business operations and economic conditions to those described herein and will vary based on platform utilization, the size of the business, and individual business operating procedures and infrastructure.

# RETURN ON INVESTMENT: AFFILIATES

**Table 3. Estimated Return on Investment for a Typical Family Child Care Home in an ELV Alliance**

	Tier I		Tier II		Tier III	
	Initial	On-Going	Initial	On-Going	Initial	On-Going
<b>COSTS</b>						
Training	\$130	\$110	\$240	\$170	\$240	\$170
Quality Rating Improvement System			\$100	\$50	\$100	\$50
Affiliate Fee*	\$600	\$600	\$1,200	\$1,200	\$2,230	\$3,260
<b>Total Costs</b>	<b>\$730</b>	<b>\$710</b>	<b>\$1,540</b>	<b>\$1,420</b>	<b>\$2,570</b>	<b>\$3,480</b>
<b>BENEFITS</b>						
Direct Benefits						
Discount Purchases	\$110	\$220	\$110	\$220	\$110	\$220
Tier II Direct Benefits			\$200	\$0	\$200	\$0
Billing Services					\$150	\$300
Indirect Benefits						
Productivity and Time Savings	\$40	\$80	\$270	\$540	\$380	\$770
ELV Alliance Services	\$320	\$350	\$450	\$410	\$1,000	\$1,510
Indirect Cost Savings	\$360	\$360	\$360	\$360	\$360	\$360
<b>Total Benefits</b>	<b>\$830</b>	<b>\$1,010</b>	<b>\$1,390</b>	<b>\$1,530</b>	<b>\$2,200</b>	<b>\$3,160</b>
<b>Net Benefit/(Cost)</b>	<b>\$100</b>	<b>\$300</b>	<b>(\$150)</b>	<b>\$110</b>	<b>(\$370)</b>	<b>(\$320)</b>
<b>RETURN ON INVESTMENT (ROI)</b>						
Years to Payback		0.9		2.5		NA
Direct ROI per Dollar Over Five Years		(\$0.73)		(\$0.84)		(\$0.85)
Total		\$0.35		\$0.04		(\$0.10)
Total Net Return Over Five Years		\$1,270		\$270		(\$1,660)

\*Tier III affiliate fee includes base fee of \$100 per month plus 5 percent of billed items.

## Child Care Center

There are approximately 2,900 child care centers in Colorado, including both preschools and school-age facilities.<sup>5</sup> A child care center that joins an ELV Alliance is usually an established business that has its own policies, procedures, and staff. The Tier I services are simple to implement into the organization and require the least amount of investment out of the participation levels. A Tier I child care center sees the most savings from its use of the bulk purchasing savings. While a child care center can benefit from ELV's virtual infrastructure, most established providers will use these resources to make minor tweaks to their existing policies and procedures. As a result of the low up-front investment to implement Tier I services into a business, Tier I participants also see the largest return per dollar invested. However, these savings have to be taken in context and amount to thousands of dollars in cost savings and benefits each year rather than the larger six-digit return gained through Tier II services. There are about 64 child care centers in the four ELV Alliances.

The costs of becoming an Affiliate of an ELV Alliance include investments in training, implementation, and integration of the platforms into the operations of the business including any software upgrades, a quality rating and improvement investment, and the fees paid to the ELV Alliance for its services. The benefits include discounts and cost savings for materials and services, streamlined child management and business operations

<sup>5</sup> Colorado Department of Human Services, Division of Child Care, Statistics and Reports, <http://www.colorado.gov/cs/Satellite/CDHS-ChildYouthFam/CBON/1251586020485>

# RETURN ON INVESTMENT: AFFILIATES

through CORE, time savings associated with streamlined operations, the value of the business services and support through the ELV Alliance, and the savings over other commercially available tools and resources.

## Costs or Investment

- ◆ **Training Costs:** The transition to the ELV Platform and model requires the owner or director of a child care center business to receive training in the various platforms and services. Tier I services require almost no upfront investments, are easy to implement, and yield direct benefits as soon as Tier I membership is established. For a child care center, the initial training in the ELV Platform will take approximately 1.5 hours and will involve about two people from the center including the director and an employee involved in purchasing. A few additional trainings are usually necessary throughout the year to highlight and educate the center on the various uses of the ELV Platform.

Tier II and Tier III Affiliates generally need additional training in the use of CORE. The initial CORE training will usually take between three and four hours for two center employees. CORE users will typically receive additional monthly trainings as needed. The center employees can reduce their training time as they get more familiar with the ELV Platform and CORE. On-going training will average about 0.25 hours per month two employees managing CORE.

The cost of training for the child care center providers is equal to the value of their time per hour, about \$18.26 based on an average hourly wage for workers in educational services in Colorado. The total combined cost of initial trainings in the ELV Alliance service areas ranges from \$490 to \$1,040 with an on-going annual cost ranging from \$220 to \$330, depending upon the provider's tier level.

- ◆ **Quality Rating Improvement System:** Membership in an ELV Alliance requires the Tier II and III Affiliates to get a quality rating. A quality rating and improvement can cost an estimated \$4,000 for a child care center with four rated classrooms and needs to be updated every other year. However, the cost to the child care center Affiliate will likely be about 10 percent of the total cost with the other 90 percent contributed through an ELV Alliance. The initial cost of the quality rating is an estimated \$400 with an on-going annualized cost of about \$200 each year. The provider will often make some quality improvements in conjunction with their quality rating. However, the costs of improving a quality rating are not included in this analysis; the analysis only includes the base fee for obtaining the rating.
- ◆ **Affiliate Fees:** The monthly fees required for joining an ELV Alliance are a cost for an Affiliate. The fees for child care center providers range from \$100 per month for a large Tier I center to a base fee of \$250 per month for Tier II and Tier III providers. Tier III providers also pay a five percent fee based on the cost of billed items. For a child care center with 72 FTE children, annual fees will range from \$1,800 per year for Tier I services to \$35,080 per year for Tier III services based on about \$641,520 of billing.

## Direct Benefits

- ◆ **Discount Purchases:** The ELV Platform offers direct benefits through discounted materials and service costs. The largest benefits are through discounted food purchases, insurance benefit savings, and discount school supplies. Food purchases can cost upwards of \$3,000 per month for a large child care center and ELV Alliance members can achieve a 10 percent savings. School supplies are discounted by 20 percent through the platform.

Child care centers also benefit from ELV Alliance membership through insurance benefit savings. Employee benefits represent a significant cost to child care center providers. ELV utilizes the payroll and human

# RETURN ON INVESTMENT: AFFILIATES

resources services of Automatic Data Processing, Inc. (ADP). ADP can save a child care center money by managing employee benefits and insurance products.

Other direct cost savings for operational materials are through the office supplies, the janitorial and kitchen supplies, and first-aid supplies discounts, among other things. For instance, the ELV Platform also produces direct benefits for a child care center through reduced costs for job postings, marketing, credit card fees, and shipping. Some of these tools are services the child care center would not otherwise utilize or are costly. For instance, the platform has a mapping application to support direct mailings for target demographic groups to advertise their business. This service can be coupled with postcard templates, pre-negotiated printing services, and mailing services.

In addition to the discounted business purchases, the ELV Alliance membership provides business support through the virtual infrastructure in the ELV Platform by offering resources such as sample parent and employee handbooks, human resources policies, business forms, and job descriptions. The typical child care center will likely have this infrastructure already developed prior to joining an ELV Alliance. However, a new business could realize large savings by utilizing these tools. On their own, these resources can cost thousands of dollars for a business to develop.

Benefits from discounted purchases differ for each Tier level of participation assuming each type of provider utilizes the discounts on a varying bundle of goods and services. Tier I providers utilize the ELV Platform's discounted purchases for a wider array of items since other benefits that supersede some of the discounts are only available to Tier II and Tier III providers. This is the case for the food purchases discounts and discounted credit card merchant fees, both of which are not included in the Tier II and Tier III analyses.

The benefits over the first year from discount purchases were discounted by 50 percent to account for the gradual implementation and utilization of the ELV Platform services. The estimated direct benefit for a Tier I provider is \$7,480 in the first year with an on-going annual benefit of about \$11,420. The direct benefit for a Tier II provider is lower assuming it utilizes a vended meal service program rather than discount food purchases, the benefits of which are included in the Tier II Direct Benefits. The benefits for a Tier II provider are an estimated \$5,680 in the first year with an on-going annual benefit of about \$7,820. The benefits for a Tier III provider are an estimated \$5,440 in the first year with an on-going benefit of \$7,350. As the ELV Alliance's billing services benefits include payment of credit card merchant fees for the Tier III provider, they will not represent a discount purchase benefit.

- ◆ **Tier II Direct Benefits:** Tier II direct benefits include a computer and vended meal service program savings. A switch to CORE includes a computer used to manage child records and log children in and out each day. ELV values the computer at about \$200. The computer is a one-time benefit for the provider. A Tier II provider is assumed to utilize a vended meal service program rather than purchase their own food at a discount through the ELV Platform. ELV negotiates discounted rates for Tier II and Tier III Affiliates that utilize their food program sponsorship, amounting to about \$0.25 per child per day. The direct benefit from Tier II services is about \$4,700 in the first year with an on-going annual benefit of about \$4,500.
- ◆ **Billing Services:** Billing services provided by the ELV Alliance result in direct benefits for a child care center, as measured by a reduction in internal billing costs. Another large cost savings is the elimination of credit card merchant fees at the provider level since the ELV Alliance assumes tuition collection responsibilities. These fees can amount to thousands of dollars depending on how many of a centers' families pay with credit cards. The direct cost savings from these services is an estimated \$4,690 in the first year with

# RETURN ON INVESTMENT: AFFILIATES

an on-going annual benefit of about \$9,370. The benefits were discounted in the first year by 50 percent to account for the gradual implementation of the services.

## Indirect Benefits

- ◆ **Productivity and Time Savings:** The ELV Alliance's service areas provide indirect benefits through increased productivity and time savings. The ELV Platform provides a one-stop resource for business materials and services. Time savings through the ELV Platform are also a result of the efficiencies gained from the process of revising business forms and materials. The CORE child management system brings additional time savings to the child care center through improved records management, improved bookkeeping, and improved parent-provider interactions. Billing services provided through an ELV Alliance reduce the time spent collecting bills, managing bad debt, and sending invoices. The indirect benefits from time savings through the ELV Alliance service areas ranges from about \$730 to \$3,500 in the first year with an on-going annual benefit ranging from \$1,460 to \$7,010, depending on the provider's tier level. The benefits were discounted in the first year by 50 percent to account for the gradual implementation of the services.
- ◆ **Value of ELV Alliance Services:** Indirect benefits through the ELV service areas also include the value of the services that are provided by the ELV Alliance that further benefit the provider. This includes the value of the ELV Alliance's technical assistance, training opportunities, quality improvements and QRIS assistance, and billing services that add value to the child care center without having to be internalized by the provider. The value of the services provided by the ELV Alliance is estimated as the cost to the Alliance to provide the services to their Affiliates.

It should be noted that there is a wide range in the value a provider will assign to billing services in practice. The family child care homes and child care centers that will find the most value in an ELV Alliance's billing services are those with a large proportion of children that utilize CCCAP and other third parties to subsidize their tuition. CCCAP, in particular, is extremely time-consuming and difficult for most businesses. Based on ELV's experience, the providers that utilize billing services often have a high percentage of subsidized children, upwards of 50 to 60 percent. The benefits of billing services are dependent on the individual circumstances of each child care business. These circumstances need to be considered when determining the provider's potential returns.

The initial indirect benefits to a child care center from these activities range from \$340 to \$10,860 with an on-going annual benefit ranging from \$400 to \$18,740, depending on the provider's tier level.

- ◆ **Indirect Cost Savings:** The final component of the indirect benefits is the cost savings of products and services supplied through the ELV platform over other alternatives. This includes the cost of continuing education for state child care worker licensing requirements and the cost of alternative child care management systems. The 12 credit hours of online training through the ELV Platform is a significant value to the typical child care center business with 20 employees that need ongoing training. The benefit is calculated as the market value of similar training that would be received elsewhere if it was not available through the ELV Platform. The value of the initial indirect cost savings ranges from \$3,600 to \$6,100 in the first year with on-going annual savings ranging from \$7,200 to \$9,700, depending on the provider's tier level.

## Return on Investment

ROI, in general, is the net benefit of an investment divided by the cost of the investment. The intent of this study is to estimate the value of the efficiencies (the returns) achieved through inclusion in the ELV Alliance. This

# RETURN ON INVESTMENT: AFFILIATES

analysis measures the returns in several different ways including years to payback, direct return on investment per dollar over five years, total direct & indirect return on investment per dollar over five years, and total net returns over five years.

- ◆ A typical Tier I child care center Affiliate will pay back their cost in the ELV Alliance in about 0.2 years based on the expected benefits available through the ELV Platform, technical assistance, and ELV Alliance training opportunities. The direct return on investment over five years is \$4.13 per dollar invested in the ELV Alliance, meaning that the provider receives \$4.13 more in direct benefits per each dollar spent to participate in the ELV Alliance. The returns become even greater when the value of the indirect benefits is included. The direct and indirect return on investment totals \$8.08 per dollar. After five years of inclusion in the ELV Alliance model, a Tier I child care center will have received \$83,800 more in direct and indirect benefits than what they had paid to participate in the ELV Alliance.
- ◆ A typical Tier II child care center Affiliate will reach the point of pay back in about 0.2 years based on the expected benefits available through the ELV Platform, technical assistance, ELV Alliance training opportunities, and child management system efficiencies. The direct return on investment over five years is \$2.22 per dollar invested in the ELV Alliance services. The direct and indirect returns total \$6.17 per dollar. After five years of inclusion in the ELV Alliance, a Tier II child care center will have saved \$114,400.
- ◆ A typical Tier III child care center Affiliate will reach the point of pay back in about 0.6 years based on the expected benefits available through the ELV Platform, technical assistance, ELV Alliance training opportunities, child management system efficiencies, and billing services. The direct return on investment over five years is (\$0.63) per dollar invested in the ELV Alliance services, meaning that membership in the ELV Alliance model costs more than the value of the direct benefits received. It is when the value of the indirect benefits is added that inclusion in the ELV Alliance pays off. The direct and indirect return on investment totals \$0.61 per dollar. After five years of inclusion in the ELV Alliance model, a Tier III child care center will have saved \$99,100.
- ◆ These returns and payback assume similar business operations and economic conditions to those described herein and will vary based on platform utilization, the size of the business, and individual business operating procedures and infrastructure.

# RETURN ON INVESTMENT: AFFILIATES

**Table 4. Estimated Return on Investment for a Typical Child Care Center in an ELV Alliance**

	Tier I		Tier II		Tier III	
	Initial	On-Going	Initial	On-Going	Initial	On-Going
<b>COSTS</b>						
Training	\$490	\$220	\$1,040	\$330	\$1,040	\$330
Quality Rating			\$400	\$200	\$400	\$200
Affiliate Fee*	\$1,800	\$1,800	\$3,000	\$3,000	\$19,040	\$35,080
<b>Total Costs</b>	<b>\$2,290</b>	<b>\$2,020</b>	<b>\$4,440</b>	<b>\$3,530</b>	<b>\$20,480</b>	<b>\$35,610</b>
<b>BENEFITS</b>						
Direct Benefits						
Discount Purchases	\$7,480	\$11,420	\$5,680	\$7,820	\$5,440	\$7,350
Tier II Direct Benefits			\$4,700	\$4,500	\$4,700	\$4,500
Billing Services					\$4,690	\$9,370
Indirect Benefits						
Productivity and Time Savings	\$730	\$1,460	\$2,190	\$4,380	\$3,500	\$7,010
ELV Alliance Services	\$340	\$400	\$2,280	\$1,580	\$10,860	\$18,740
Indirect Cost Savings	\$3,600	\$7,200	\$6,100	\$9,700	\$6,100	\$9,700
<b>Total Benefits</b>	<b>\$12,150</b>	<b>\$20,480</b>	<b>\$20,950</b>	<b>\$27,980</b>	<b>\$35,290</b>	<b>\$56,670</b>
<b>Net Benefit/(Cost)</b>	<b>\$9,860</b>	<b>\$18,460</b>	<b>\$16,510</b>	<b>\$24,450</b>	<b>\$14,810</b>	<b>\$21,060</b>
<b>RETURN ON INVESTMENT (ROI)</b>						
Years to Payback		0.2		0.2		0.6
Direct ROI per Dollar Over Five Years		\$4.13		\$2.22		(\$0.63)
Total Direct and Indirect ROI per Dollar Over Five Years		\$8.08		\$6.17		\$0.61
Total Net Return Over Five Years		\$83,800		\$114,400		\$99,100

\*Tier III affiliate fee includes base fee of \$250 per month plus 5 percent of billed items.

# RETURN ON INVESTMENT: ELV ALLIANCE

The ELV Alliance is an organization that incorporates the role of an Alliance manager into its existing roles and operations. For instance, the four studied ELV Alliance organizations include two large child care center businesses, a child care resource and referral agency, and a county-level early childhood council. Expanding into the role of an ELV Alliance allows the child care agency to broaden its mission and access an on-going funding stream through Affiliate fee revenues. The ELV Alliance also receives the benefit of a close association to ELV and the David and Laura Merage Foundation.

The costs and returns associated with an ELV Alliance are based on providing services and collecting fees from a mix of typical Affiliates as described in the previous section. An ELV Alliance markets the shared services model and recruits child care providers into the Alliance. This report analyzes the ELV Alliance as if it includes a maximum number of 80 Affiliates. The analysis assumes that 75 percent of the Affiliates of the ELV Alliance are child care centers and 25 percent are family child care homes.

The ideal makeup and financial feasibility of an ELV Alliance is still in the trial stages. The number of Affiliates that an ELV Alliance manages is contingent on the number of employees it has. This analysis assumes the typical ELV Alliance will have six FTE employees. These employees will be able to provide services for and manage an estimated 80 Affiliates based on a business model supplied by the ELV Alliance @ ACECC and from input from ELV. ELV estimates that a typical ELV Alliance will have about 40 percent of its Affiliates in Tier I services, 40 percent in Tier II services, and the remaining 20 percent utilizing the Tier III level of services. The goal of an ELV Alliance is to move their Affiliates from a Tier I level of services to the full range of services offered through Tier III participation.

The ELV Alliance's 80 Affiliates are assumed to be comprised of 20 family child care homes and 60 child care centers. Based on the typical Affiliate operations, the ELV Alliance would have a licensed capacity of 4,960 children, serving about 4,460 FTE children and about 3,740 families.

	Affiliates	Licensed Capacity	FTE Enrollment	Families
<b>Family Child Care Home</b>	<b>20</b>	<b>160</b>	<b>120</b>	<b>140</b>
Tier I	8	64	48	56
Tier II	8	64	48	56
Tier III	4	32	24	28
<b>Child Care Centers</b>	<b>60</b>	<b>4,800</b>	<b>4,320</b>	<b>3,600</b>
Tier I	24	1,920	1,728	1,440
Tier II	24	1,920	1,728	1,440
Tier III	12	960	864	720
<b>Total</b>	<b>80</b>	<b>4,960</b>	<b>4,440</b>	<b>3,740</b>

## Revenues

The ELV Alliance's revenues are comprised of the fees paid by the Affiliates for the Alliance's services based on tier level. The fees depend on whether the provider is a family child care home or a child care center and on the level of service the Affiliate receives. Fees range from \$600 to \$3,260 per year for a family child care home in this analysis and from \$1,800 to \$35,080 per year for a child care center. Based on the assumptions in this analysis, the Affiliate fees would total about \$27,440 for 20 family child care homes and about \$536,110 for 60

# RETURN ON INVESTMENT: ELV ALLIANCE

child care centers. Therefore, total fee revenue for the ELV Alliance would be about \$563,550 each year, with fee revenue from child care centers representing about 95 percent of the total.

- ◆ Most of the fee revenue the ELV Alliance will collect will be from providing billing services. This fee revenue comprises about 70 percent of the ELV Alliance's total fee revenue based on the assumptions in this analysis.
- ◆ Other revenue sources that may be available to an ELV Alliance but are not part of this analysis include seed money from ELV and any third-party fundraising that the ELV Alliance may be able to attract. The intent of the ELV Alliance model is for the Affiliate revenues to eventually cover the costs of providing business operational services to them. Thus, only the Affiliate fee revenues are taken into account in this analysis.

## Expenses

The ELV Alliance incurs costs for providing services to its Affiliate child care providers. The majority of these expenses are for salaries and employee benefits for the six FTE employees of the Alliance. Other expenses include general administrative costs, professional development, marketing and publications, professional services, equipment and IT, and bad debt risk from family or subsidy bill collecting.

- ◆ General administrative expenses include items such as office supplies, rent, bank fees, insurance, and travel costs. General administrative expenses comprise about six percent of the ELV Alliance's budget or about \$24,200 each year.
- ◆ The ELV Alliance spends money on professional development including professional conferences, meetings, events, and membership dues and subscriptions to other organizations. These costs comprise less than one percent of the Alliance's budget or about \$3,800 each year.
- ◆ The ELV Alliance spends money on marketing tools to attract Affiliates into the Alliance network and on website development. These costs comprise about one percent of the budget or an estimated \$4,700 each year.
- ◆ Professional services expenses include legal services, auditing and accounting services, and other business support services. These costs represent seven percent of the Alliance's budget or about \$31,300 each year.
- ◆ The ELV Alliance makes investments in equipment, IT services (such as credit card merchant fees), and infrastructure for its operations. These costs comprise an estimated 13 percent of the Alliance's budget or about \$54,400 each year.
- ◆ The ELV Alliance assumes the risk of bad debt collection and defaulted payments from its Affiliates. The estimated cost of bad debt comprises about one percent of the Alliance's budget or about \$4,300 each year.
- ◆ A large cost to the ELV Alliance is contributions towards Affiliates' quality ratings and improvement. An ELV Alliance will cover an estimated 90 percent of the cost of quality ratings for its Tier II and Tier III Affiliates. This expense will take the form of campaigning for charitable dollars and leveraging those dollars for quality ratings purposes. The estimated cost of quality ratings and improvement assistance is estimated to be about 10 percent of fee revenue, or about \$56,400 each year.
- ◆ Salaries and employee benefits are the largest expenditure for the ELV Alliance. The six FTE employees will earn an average annual salary of about \$41,650. Compensation for the employees totals about \$304,600, consisting of \$249,900 in payroll and \$54,700 in employee benefits.

# RETURN ON INVESTMENT: ELV ALLIANCE

## Return

The average annual return to the ELV Alliance is calculated as total revenues less total costs. The typical Alliance will have an annual return of nearly \$79,850 when fully operating with 80 Affiliates.

- ◆ The largest returns as a percent of service costs are realized through providing services to Tier I Affiliate child care centers. The ELV Alliance can provide services to these Affiliates for a reasonably low cost while generating enough revenue in Affiliate fees to provide the services. Most of the cost of Tier I services has been shouldered by ELV through its development of the virtual infrastructure and bulk purchasing savings negotiations.
- ◆ Tier III services including billing have a smaller return as a percent of service costs. While Tier III Affiliate fees comprise most of the ELV Alliance revenue, billing services comprise most of the costs of the ELV Alliance. The return to the ELV Alliance will largely depend on the composition of the children that are served through its Affiliates and their methods of payment. CCCAP billing, in particular, absorbs more time and cost than billing for private pay. The more heavily dependent an ELV Alliance is on subsidy pay, the smaller the return will be as a percent of service costs.
- ◆ The ELV Alliance sees a significant annual return based on the assumptions used in this analysis. However, the expenses in the model do not include a fee charged to the ELV Alliance for ELV's support and resources. This fee has yet to be determined and has not been implemented for any of the current Alliances. The fee paid to ELV is a critical piece in the shared services model's sustainability. The fee will allow ELV to offer continued support for the Alliance model without having to completely finance its activities through third-party contributions.
- ◆ It should be noted that not all ELV Alliances will realize the returns presented in this study. A variety of factors including Affiliate mix, cost structure, and level of CCCAP billing will influence the returns associated with operating an ELV Alliance. In some years, the ELV Alliance may not see a return at all and may face revenue shortfalls.

Louise Stoney, an independent consultant working with the David and Laura Merage Foundation, stated in a shared services analysis that, "For Alliances to be sustainable and to do the work needed to assist member providers in their efforts to maintain and raise quality, these networks will typically need shared staff who are skilled in raising third-party funding on a consistent basis...The need for continued third-party funding to augment parent fees and child care reimbursement rates should not be viewed as an indication that an Alliance is not sustainable...Rather, the ability to raise these funds – year in and year out – is a sign that the Alliance is sustainable" (Stoney, 2009).

The revenues and expenses described herein assume similar business operations and economic conditions and will vary based on the number and composition of the ELV Alliance Affiliates, the specific market needs of a region, and the level of services offered.

# RETURN ON INVESTMENT: ELV ALLIANCE

**Table 6. Estimated On-Going Annual Return for a Typical ELV Alliance**

<b>Revenues</b>	<b>Affiliates</b>	<b>Annual Fee</b>	<b>Total Revenue</b>
Family Child Care Home Tier I Fee Revenues	8	\$600	\$4,800
Family Child Care Home Tier II Fee Revenues	8	\$1,200	\$9,600
Family Child Care Home Tier III Fee Revenues	4	\$3,260	\$13,040
Child Care Center Tier I Fee Revenues	24	\$1,800	\$43,200
Child Care Center Tier II Fee Revenues	24	\$3,000	\$72,000
Child Care Center Tier III Fee Revenues	12	\$35,080	\$420,910
<b>Total Fee Revenue</b>			<b>\$563,550</b>
<b>Operating Expenses</b>			<b>Total Expense</b>
General Administrative			\$24,200
Professional Development			\$3,800
Marketing/Publications			\$4,700
Professional Services			\$31,300
Equipment/IT (inc. Credit Card Merchant Fees)			\$54,400
Affiliate Bad Debt Collections			\$4,300
Quality Ratings Assistance			\$56,400
Salaries			\$249,900
Employee Benefits			\$54,700
<b>Total Expenses</b>			<b>\$483,700</b>
Employees			6
<b>ANNUAL RETURN</b>			<b>\$79,850</b>

# SUMMARY

The shared services model developed by ELV assists early childhood care and education providers to overcome many of the challenges they face as a business, including accounting, billing, licensing, procurement, and training. These challenges can be overwhelming and may hurt the long-term viability of a provider and hinder the provider from improving the quality and expanding the accessibility of their programs.

The goal of ELV is to create a sustainable system of shared services. This study estimates the value of the efficiencies allowed through the ELV Alliance model and analyzes the returns gained at the Affiliate and ELV Alliance level. The study emphasizes the real costs and returns that have been experienced by Affiliates and the four ELV Alliances.

## *Family Child Care Home*

A typical family child care home is assumed to have a licensed capacity of eight with on-going enrollment of six full-time equivalent (FTE) children and is owner-operated. The family child care home is also assumed to be an existing business when it joins an ELV Alliance.

- ◆ Tier I family child care home providers will reach the point of pay back in the ELV Alliance in about 0.9 years. Of the three tiers of provider participation, the largest direct and indirect returns on investment are received by the Tier I providers with an estimated ROI of \$0.35 per dollar. The total net return will be an estimated \$1,270 over five years, meaning that the value of the benefits received by the provider is \$1,270 more than their cost of participation over five years. The provider's largest cost is the Affiliate fees. The family child care home provider's largest benefits are through discount purchases and the value of online trainings qualifying for state licensing requirements.
- ◆ Tier II family child care home providers will reach the point of pay back in the ELV Alliance in about 2.5 years. The total net return will be an estimated \$270 over five years with an estimated direct and indirect return on investment of \$0.04 per dollar spent. The Tier II provider's largest benefits are through increased productivity and time savings, and through the value of ELV services offered through an Alliance.
- ◆ Tier III services fail to produce a return to the family child care home provider under the current service structure. Billing represents a minimal cost to most family child care homes, thus the benefit of receiving the service produces minimal returns. The estimated total net return for a Tier III provider is (\$1,660) over five years.
- ◆ The typical ELV Alliance network in this study consists of 20 family child care homes, 60 child care centers, and an ELV Alliance. This analysis assumes that of the 20 family child care homes, eight are enrolled at the Tier I level, eight at Tier II, and four at Tier III. Based on the assumptions of this analysis, the typical direct and indirect return on investment of the 20 family child care homes across all tier levels is \$0.04 per dollar over five years. This four percent return yields a total net return for the 20 family child care homes of \$5,680 over five years, or an average of almost \$280 per family child care home.

## *Child Care Center*

For this analysis, a typical child care center is assumed to be large with a licensed capacity of about 80 children and an estimated enrollment of about 72 full-time equivalent (FTE) children. Like the typical family child care home, the child care center model used for this analysis is assumed to be an existing business that is fully operating at the time it joins an ELV Alliance. Child care centers realize substantial returns on investments in shared services at all three tier levels.

# SUMMARY

- ◆ A Tier I child care center Affiliate pays back the cost of participation in the ELV Alliance in about 0.2 years. Tier I participation for a child care center yields a total direct and indirect return on investment of \$8.08 per dollar. The total net return for Tier I participation over five years is an estimated \$83,800.
- ◆ Of the three tiers, Tier II Affiliates realize the largest net return. With a payback period of about 0.2 years, Tier II providers receive a direct return on investment of \$2.22 per dollar and an estimated direct and indirect return on investment of \$6.17 per dollar. Tier II providers realize the largest total net return, with the value of the benefits received estimated to be \$114,400 more than their cost of participation over five years.
- ◆ While the returns for a Tier III provider in this study yielded smaller returns and a longer payback period of about 0.6 years, the returns will vary considerably based on the business structure of the center, with the most significant variable being the percentage of private pay children versus subsidy pay children. Due to the complex regulatory processes and business costs associated with applying for and receiving subsidy reimbursements, a higher percentage of subsidy pay children will greatly influence the benefits associated with billing services. This study estimates the direct and indirect return on investment is \$0.61 per dollar with a total net return over five years of \$99,100 for a Tier III Affiliate.
- ◆ The typical ELV Alliance network in this study consists of 20 family child care homes, 60 child care centers, and an ELV Alliance. This analysis assumes that of the 60 child care centers, 24 are enrolled at the Tier I level, 24 at Tier II, and 12 at Tier III. Based on the assumptions of this analysis, the typical direct and indirect return on investment of the 60 child care centers across all tier levels is \$2.24 per dollar over five years. This 224 percent return yields a total net return for the 60 child care centers of \$5.9 million over five years, or an average of almost \$99,100 per child care center.

## *ELV Alliance*

An ELV Alliance structured similarly to the example in this study will realize an on-going annual return of nearly \$79,850 each year. The returns are based on the fee revenues collected from Affiliate providers, less the costs of operations and staff needed to provide ELV Alliance services. Child care centers are likely to yield a higher percentage of the ELV Alliance's total return compared with family child care homes. In addition, Tier I services can be offered to providers for the least cost while billing services will comprise the largest costs to the ELV Alliance.

## **Beyond the Numbers**

The focus of this study has been to quantify the return on investment for the ELV Alliance model. While the analysis clearly identifies that shared services can offer a good return to a child care provider business, it does not tell the whole story. In the process of collecting data and quantifying the returns, providers and ELV Alliances shared copious amounts of anecdotal evidence of the benefits they have felt through participation in an ELV Alliance network. While these benefits do not apply universally to what a typical child care organization may experience or are difficult to quantify, they represent tangible benefits to the individual business.

One such instance is the benefit an ELV Alliance can be to a start-up business. While most members of an ELV Alliance will not be start-up businesses, the few that are will experience a significant amount of support and resources resulting in cost-savings. The technical assistance alone from the ELV Alliance is invaluable to persons who may have limited knowledge about providing child care and running a child care operation. The ELV Alliances are comprised of individuals that may have served as directors at child care centers or family child care

# SUMMARY

home operations. They are knowledgeable about the licensing requirements, funding sources, and challenges of the business.

ELV has also developed tools that allow a business to efficiently build its business infrastructure with a minimal amount of cost and effort. While most established child care businesses that join an ELV Alliance will have much of this infrastructure in place, allowing it to pick and choose ideas and tools that will enhance its business, a start-up company does not have this luxury. ELV provides professionally developed business resources and policies including handbooks, HR policies, forms, report templates, sample curriculum, and a customizable child care management system. All of these resources are available online for ELV Alliance members.

Another advantage is a lower cost of turnover for a child care business, turnover that otherwise could be devastating for the business. Two of the current ELV Alliance Affiliates lost their directors in the past year. In normal circumstances, this could set the business back for months. In extreme circumstances, this situation could result in business failure. Often in child care settings, the directors institute their own methods and policies for the business. Due to the high cost of child care management systems, many opt to establish their own system of records management and billing. As a result, the sudden departure of the director is potentially devastating if these processes leave with the person. An ELV Alliance offers backup to the provider and established, stable business practices and infrastructure. In the case of the two ELV Alliance Affiliates, both were able to operate several months without directors. Billing operations had been taken over by the ELV Alliance prior to the directors' departures and CORE allowed the businesses to avoid any setbacks in records management or care. As new directors and staff are brought into an ELV Alliance Affiliate, they do not have to rebuild the business from the ground up or make major changes. The ELV Alliance framework creates a transition that is much more seamless than would otherwise be the case.

Another advantage is the professional network an Affiliate can access upon joining an ELV Alliance. The child care industry in Colorado is largely devoid of any such professional organizations or networks. Many providers feel they are on an island in a sea of challenges and regulations. While the value of this network is difficult to quantify, several providers feel the ELV Alliance fees are worth the access to a professional group. A professional network allows businesses to share ideas, best business practices, opportunities, workforce, and enrollment. One of the Affiliate business owners described meeting another child care center close to her business through an ELV Alliance network. When the other person's center would reach capacity, they referred the families to her center. Likewise, she began to refer toddlers and infants back to the other center since her center serves older children.

One of the challenges of a child care business is the complex patchwork of federal, state, and local subsidies for tuition, food, welfare, and quality. This includes Head Start, the Colorado Child Care Assistance Program (CCCAP), the Colorado Preschool Program (CPKP), and the Child and Adult Care Food Program (CACFP). The billing, paperwork, regulations, and reporting for these programs is daunting. While the study found modest returns related to the billing services, in reality, the burden of billing can vary greatly from business to business based on the composition of their children and tuition payments. One of the current ELV Alliance Affiliates has about 75 percent of its children receiving subsidy payments through CCCAP. CCCAP, in particular, was extremely time-consuming and difficult for this business as it served children in three counties and each county administers the program differently and has different eligibility requirements. For this business, the ELV Alliance billing services had huge benefits and savings including reducing its billing time by at least the work hours of one FTE employee, or a value of about \$37,980.<sup>6</sup>

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<sup>6</sup>Colorado Department of Labor and Employment, Quarterly Census of Employment and Wages, annual average 2011. Value based on the average annual wage in the educational services industry.

# SUMMARY

Improvements in child care quality and education also improve a provider's viability. One of the difficulties of a child care business is attracting qualified staff and teachers. One of the Affiliate businesses that contributed to the study found that once they got a Qualistar rating they were able to attract the staff they needed because the job applicants were looking for a Qualistar rated business. The Qualistar rating also helped this business expand into serving Denver Preschool Program (DPP) children since the program requires its centers to be Qualistar rated. Part of the viability of a child care center is its ability to attract a wide range of children to consistently fill enrollment.

In many cases, tuition revenue and subsidy payments do not cover all of the costs of providing high-quality care to children. Businesses have to supplement with some form of fundraising or may run deficits. Louis Stoney states that, "nearly every high-quality [early childhood education] program in the U.S. must continuously generate funds" (Stoney, 2009). A viable business must survive the ebbs and flows in funding, enrollment, subsidies, and tuition. A viable business must have the means to provide high quality goods and services. Through the benefits of the ELV Alliance model, a childcare business is more likely to remain viable, consistently attracting families and providing quality care.

# APPENDIX I: COSTS/BENEFITS DETAIL

Table 7. Family Child Care Home Detailed Costs and Benefits						
	Tier I		Tier II		Tier III	
	Initial	On-Going	Initial	On-Going	Initial	On-Going
<b>COSTS</b>						
Training						
Training (ELV Platform)	\$130	\$110	\$130	\$110	\$130	\$110
Training (CORE)			\$110	\$60	\$110	\$60
Quality Rating Improvement System			\$100	\$50	\$100	\$50
Affiliate Fee	\$600	\$600	\$1,200	\$1,200	\$2,230	\$3,260
<b>Total Costs</b>	<b>\$730</b>	<b>\$710</b>	<b>\$1,540</b>	<b>\$1,420</b>	<b>\$2,570</b>	<b>\$3,480</b>
<b>BENEFITS</b>						
Direct Benefits						
Discount Purchases						
School Supplies	\$80	\$160	\$80	\$160	\$80	\$160
Office Supplies	\$10	\$10	\$10	\$10	\$10	\$10
Food Purchases						
Janitorial and Kitchen Supplies	\$10	\$30	\$10	\$30	\$10	\$30
Other Supplies and Services	\$10	\$20	\$10	\$20	\$10	\$20
Insurance Benefit Savings						
Tier II Direct Benefits						
Computer			\$200	\$0	\$200	\$0
Vended Meal Service Program						
Billing Services						
Billing Costs					\$150	\$300
Credit Card Merchant Fees						
Indirect Benefits						
Productivity and Time Savings						
Time Savings (ELV Platform)	\$40	\$80	\$40	\$80	\$40	\$80
Time Savings (CORE)			\$190	\$380	\$190	\$380
Time Savings (Licensing)			\$40	\$80	\$40	\$80
Time Savings (Billing Services)					\$110	\$230
ELV Alliance Services						
Value of Technical Assistance	\$200	\$200	\$200	\$200	\$200	\$200
Value of Training Opportunities	\$40	\$70	\$40	\$70	\$40	\$70
Value of Quality Improvements	\$80	\$80	\$80	\$80	\$80	\$80
Value of QRIS Assistance			\$130	\$60	\$130	\$60
Value of Vended Meal Service Sponsorship						
Value of Billing Services (ELV Alliance)					\$550	\$1,100
Indirect Cost Savings						
Online Training	\$360	\$360	\$360	\$360	\$360	\$360
Child Management System Savings						
<b>Total Benefits</b>	<b>\$830</b>	<b>\$1,010</b>	<b>\$1,390</b>	<b>\$1,530</b>	<b>\$2,200</b>	<b>\$3,160</b>
<b>Net Benefit/(Cost)</b>	<b>\$100</b>	<b>\$300</b>	<b>(\$150)</b>	<b>\$110</b>	<b>(\$370)</b>	<b>(\$320)</b>
<b>RETURN ON INVESTMENT (ROI)</b>						
Years to Payback		0.9		2.5		NA
Direct ROI per Dollar Over Five Years		(\$0.73)		(\$0.84)		(\$0.85)
Total Direct and Indirect ROI per Dollar Over Five Years		\$0.35		\$0.04		(\$0.10)
Total Net Return Over Five Years		\$1,270		\$270		(\$1,660)

# APPENDIX I: COSTS/BENEFITS DETAIL

**Table 8. Child Care Center Detailed Costs and Benefits**

	Tier I		Tier II		Tier III	
	Initial	On-Going	Initial	On-Going	Initial	On-Going
<b>COSTS</b>						
Training						
Training (ELV Platform)	\$490	\$220	\$490	\$220	\$490	\$220
Training (CORE)			\$550	\$110	\$550	\$110
Quality Rating Improvement System			\$400	\$200	\$400	\$200
Affiliate Fee	\$1,800	\$1,800	\$3,000	\$3,000	\$19,040	\$35,080
<b>Total Costs</b>	<b>\$2,290</b>	<b>\$2,020</b>	<b>\$4,440</b>	<b>\$3,530</b>	<b>\$20,480</b>	<b>\$35,610</b>
<b>BENEFITS</b>						
Direct Benefits						
Discount Purchases						
School Supplies	\$940	\$1,870	\$940	\$1,870	\$940	\$1,870
Office Supplies	\$180	\$360	\$180	\$360	\$180	\$360
Food Purchases	\$1,800	\$3,600				
Janitorial and Kitchen Supplies	\$160	\$320	\$160	\$320	\$160	\$320
Other Supplies and Services	\$880	\$1,750	\$880	\$1,750	\$640	\$1,280
Insurance Benefit Savings	\$3,520	\$3,520	\$3,520	\$3,520	\$3,520	\$3,520
Tier II Direct Benefits						
Computer			\$200	\$0	\$200	\$0
Vended Meal Service Program			\$4,500	\$4,500	\$4,500	\$4,500
Billing Services						
Billing Costs					\$1,800	\$3,600
Credit Card Merchant Fees					\$2,890	\$5,770
Indirect Benefits						
Productivity and Time Savings						
Time Savings (ELV Platform)	\$730	\$1,460	\$730	\$1,460	\$730	\$1,460
Time Savings (CORE)			\$730	\$1,460	\$730	\$1,460
Time Savings (Licensing)			\$730	\$1,460	\$730	\$1,460
Time Savings (Billing Services)					\$1,310	\$2,630
ELV Alliance Services						
Value of Technical Assistance	\$200	\$200	\$200	\$200	\$200	\$200
Value of Training Opportunities	\$60	\$120	\$60	\$120	\$60	\$120
Value of Quality Improvements	\$80	\$80	\$80	\$80	\$80	\$80
Value of QRIS Assistance			\$1,520	\$760	\$1,520	\$760
Value of Vended Meal Service Sponsorship			\$420	\$420	\$420	\$420
Value of Billing Services (ELV Alliance)					\$8,580	\$17,160
Indirect Cost Savings						
Online Training	\$3,600	\$7,200	\$3,600	\$7,200	\$3,600	\$7,200
Child Management System Savings			\$2,500	\$2,500	\$2,500	\$2,500
<b>Total Benefits</b>	<b>\$12,150</b>	<b>\$20,480</b>	<b>\$20,950</b>	<b>\$27,980</b>	<b>\$35,290</b>	<b>\$56,670</b>
<b>Net Benefit/(Cost)</b>	<b>\$9,860</b>	<b>\$18,460</b>	<b>\$16,510</b>	<b>\$24,450</b>	<b>\$14,810</b>	<b>\$21,060</b>
<b>RETURN ON INVESTMENT (ROI)</b>						
Years to Payback		0.2		0.2		0.6
Direct ROI per Dollar Over Five Years		\$4.13		\$2.22		(\$0.63)
Total Direct and Indirect ROI per Dollar Over Five Years		\$8.08		\$6.17		\$0.61
Total Net Return Over Five Years		\$83,800		\$114,400		\$99,100

# APPENDIX II: ASSUMPTIONS DETAIL

## ELV Alliance Affiliates Costs and Benefits

This section of the appendix describes the data and assumptions used in the family child care home and child care center Affiliate analyses. Please note that some numbers may not add exactly due to rounding.

### Analysis Assumptions

The costs, benefits, and returns in this study are based on two general assumptions. First, it is assumed that the typical family child care home and the child care center Affiliates are taking full advantage of the services offered through ELV and the ELV Alliance. In practice, if an Affiliate organization does not participate in one or more of the service areas, they will not receive the benefit of that service, and their return may be lower than what is estimated in the study. The second basic assumption is that the Affiliates need and value the services that are provided. For example, if an Affiliate utilizes a retailer that offers a lower price on supplies than what is offered through the ELV Platform, the Affiliate will not find value or benefit from the discounts estimated in this study.

### Tuition

**Family Child Care Home:** The tuition assumption for the family child care home is used to estimate the hourly wage rate for the provider, Affiliate fees, and billing costs and benefits. The tuition assumption is based on data reported by the National Association of Child Care Resource and Referral Agencies (NACCRRA) in the 2012 publication of *Child Care in the State of Colorado*. Average annual rates are published for three age groups, infants (\$8,518), four-year old children (\$7,889), and school-age children (\$4,206). These rates were averaged to derive an annual tuition estimate of \$6,870 per child for a family child care home.

**Child Care Center:** The tuition assumption for the child care center is used to estimate Affiliate fees and billing costs and benefits. Based on averaging the rates for infants (\$12,621), four-year old children (\$9,239), and school-age children (\$4,877) reported in the 2012 *Child Care in the State of Colorado* publication, annual tuition costs are estimated at \$8,910 per child.

### Hourly Wage

**Family Child Care Home:** The value of the family child care home provider's time is calculated as the difference between tuition and meal plan revenue (\$49,470) and program costs for a typical family child care home business (\$9,690). The difference (\$39,780) is the net income to the provider and this amount is divided by 2,080 hours of work per year to calculate the hourly wage (\$19.13).

**Child Care Center:** The average annual wage for employees providing educational services is \$37,980, or \$18.26 per hour based on 2,080 hours of work per year. (Source: Colorado Department of Labor & Employment, Quarterly Census of Employment & Wages, 2011 annual for Colorado)

### Costs

#### *Training*

Training session attendance and learning the ELV Platform represent costs to the Affiliate child care provider as measured by the amount of time spent and the hourly value of the provider's or employees' time. Training costs were divided into two basic categories consisting of training to use the ELV Platform and training to use CORE. Affiliates interviewed for the study indicated that they did not incur substantial time or cost to train for a Tier III level of support utilizing billing services so the analysis assumes this cost is negligible. Training costs have two phases, the initial training session and any additional training or on-going support.

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**Training (ELV Platform):** The cost of initial training is the hourly value of the provider/employee's time, multiplied by the number of employees involved in the initial training, and multiplied by the number of hours of the initial training. For a family child care home, the initial cost of training was based on one person receiving a one-hour training session, or a cost of \$19. For a child care center, the initial cost was based on two persons receiving a 1.5-hour training session, or a cost of \$55.

Based on interviews, about 0.5 hours of on-going monthly training for one person was estimated for a family child care home. This includes any formal trainings attended through their ELV Alliance or any support received from the ELV Alliance or directly from ELV. A child care center would likely spend more time training and receiving ELV Platform support than a family child care home provider. Thus, for a child care center an estimate of one hour per month for two persons was derived for the initial year of Alliance membership with the on-going training and support falling to 0.5 hours per month for two persons in subsequent years. These estimates yield an on-going cost of about \$110 per year for a family child care home and about \$220 per year for a child care center. The initial cost consists of the initial training plus a full year of on-going monthly training. The annual on-going cost consists of a full year of on-going monthly training.

Family Child Care Home (initial):  $(\$19.13 \times 1 \text{ hour}) + (\$19.13 \times 0.5 \text{ hours} \times 12 \text{ months}) = \$130$

Family Child Care Home (on-going):  $\$19.13 \times 0.5 \text{ hours} \times 12 \text{ months} = \$110$

Child Care Center (initial):  $(\$18.26 \times 1.5 \text{ hours} \times 2 \text{ employees}) + (\$18.26 \times 1 \text{ hour} \times 2 \text{ employees} \times 12 \text{ months}) = \$490$

Child Care Center (on-going):  $\$18.26 \times 0.5 \text{ hours} \times 2 \text{ employees} \times 12 \text{ months} = \$220$

**Training (CORE):** Implementing CORE into a child care operation requires additional support and training. Initial training was estimated at three hours for both the family child care home and the child care center. This estimate, like the ELV Platform training estimate, was multiplied by the number of employees attending training and by the hourly wage to yield a total cost. The cost of the initial three-hour training session is \$60 for a family child care home for one person and \$110 for a child care center for two persons.

Similar to the ELV Platform training analysis, the on-going cost of training was calculated for the Affiliates. On-going training costs for a family child care home were estimated based on 0.25 hours of monthly training in the first year, with on-going training in subsequent years also averaging about 0.25 hours per month. For a child care center, trainings and support were estimated to average about one hour per month for two employees for the first year with on-going training decreasing to 0.25 hours per month for two employees in subsequent years. On-going training totaled about \$60 each year for a family child care home and about \$110 each year for a child care center. The initial cost consists of the initial training plus a full year of on-going monthly training. The annual on-going cost consists of a full year of on-going monthly training.

Family Child Care Home (initial):  $(\$19.13 \times 3 \text{ hours}) + (\$19.13 \times 0.25 \text{ hours} \times 12 \text{ months}) = \$110$

Family Child Care Home (on-going):  $\$19.13 \times 0.25 \text{ hours} \times 12 \text{ months} = \$60$

Child Care Center (initial):  $(\$18.26 \times 3 \text{ hours} \times 2 \text{ employees}) + (\$18.26 \times 1 \text{ hour} \times 2 \text{ employees} \times 12 \text{ months}) = \$550$

Child Care Center (on-going):  $\$18.26 \times 0.25 \text{ hours} \times 2 \text{ employees} \times 12 \text{ months} = \$110$

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## *Quality Rating Improvement System (QRIS)*

Quality improvements are an integral part of ELV Alliance involvement. The QRIS category was originally intended to capture all of the costs of improving quality and earning a quality rating. However, while estimates of the cost of a QRIS rating were readily available, the cost of quality improvements undertaken at the Affiliate level after joining an ELV Alliance were found to be unique for each provider. As the study was meant to capture costs applicable to a typical Affiliate, a uniform method of estimating the cost of quality improvements was not available. The analysis instead focused solely on the cost of acquiring a QRIS rating, a requirement for Tier II and III affiliates. As a result, the costs in this category are conservative as quality improvements are encouraged for every Affiliate provider.

The cost to an Affiliate for a QRIS is based on the cost of a Qualistar rating, and on the assumption provided by ELV that the Affiliate will likely be responsible for only 10 percent of this cost. The cost of a Qualistar rating is based on the number of rated classrooms a provider has, or a base fee of about \$1,000 for a family child care home. The typical child care center is assumed to have four rated classrooms. The Qualistar rating must be renewed every two years. It should be noted that not all providers in Colorado will have access to a Qualistar affiliated agency or that a Qualistar rating will be the only accepted rating.

Family Child Care Home (initial):  $\$1,000 \times 10 \text{ percent} = \$100$

Family Child Care Home (on-going):  $\$100 / 2 \text{ years} = \$50$

Child Care Center (initial):  $\$1,000 \times 4 \text{ rated classrooms} \times 10 \text{ percent} = \$400$

Child Care Center (on-going):  $\$400 / 2 \text{ years} = \$200$

## *Affiliate Fees*

The following fee structure provided by ELV was used in the analysis. The costs associated with billing were discounted by 50 percent in the first year for Tier III participants to account for the gradual implementation of services.

**Table 9. ELV Monthly Participation Fees**

License Type	Tier I Participation	Tier II Participation	Tier III Participation
Family Child Care Home	\$50.00	\$100.00	\$100.00 + five percent of billed items
Large Center (51-99 children licensed capacity)	\$150.00	\$250.00	\$250.00 + five percent of billed items

*Source: Early Learning Ventures*

## Direct Benefits

### *Discount Purchases*

Direct cost savings and benefits from discounted purchases were generally estimated for school supplies, office supplies, food purchases, janitorial and kitchen supplies, other supplies and services, marketing, and insurance benefit savings on a per employee basis (office supplies and insurance benefit savings) or per child basis (all other

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purchases). The food purchases discount was based on a minimum purchase requirement for the discount. The analysis is based on the following assumptions regarding full-time equivalent children and employees:

**Table 10. FTE Children and Employees by Type of Provider**

License Type	FTE Children	FTE Employees
Family Child Care Home	6	1
Child Care Center	72	20

After the total costs were derived, the discount was applied to each category. The assumptions for each category of spending follow.

**School Supplies:** The cost of school supplies for a child care provider was based on estimates from Bal Swan and from data provided through ELV’s Cost-Savings Tool completed, or partially completed, for three child care center organizations: the Little Red Schoolhouse, Summit County Preschool, and Little Angels. Based on Bal Swan’s estimates for fiscal year 2010-2011, the organization purchased about \$210 in school supplies per FTE child prior to implementing the ELV Platform. An analysis of responses from the Cost-Savings Tool yielded an estimate of about \$50 per child per year for school supplies. These estimates were averaged, yielding an estimated \$130 of school supplies per child per year. This result was applied to both the family child care home analysis and the child care center analysis as better family child care home estimates were not available.

Purchases through the ELV Platform receive an estimated 20 percent discount. At the time of the interview with the purchasing agent at Bal Swan, the center was on track for at least a 20 percent reduction in their school supplies cost compared with their cost prior to implementing the ELV Platform. For a family child care home, the school supplies discount was the most likely discount to be utilized. The benefits were discounted in the first year by 50 percent to account for the gradual increase in use.

Family Child Care Home (initial):  $\$160 \times 50 \text{ percent} = \$80$

Family Child Care Home (on-going):  $\$130 \times 6 \text{ children} \times 20 \text{ percent} = \$160$

Child Care Center (initial):  $\$1,870 \times 50 \text{ percent} = \$940$

Child Care Center (on-going):  $\$130 \times 72 \text{ children} \times 20 \text{ percent} = \$1,870$

**Office Supplies:** The cost of office supplies per employee was derived from Bal Swan’s estimates. Employee counts for Summit County Preschool, Little Red Schoolhouse, and Little Angels corresponding with the data in the Cost-Savings Tool were not provided. An estimate of \$180 per employee for office supplies each year was used. This estimate was applied to both the family child care home and child care center analyses.

ELV estimates a 15 percent savings through discount office supplies. This estimate was compared to feedback gathered through the Affiliate interviews. At the time of the interviews, Bal Swan was expecting about a 10 percent discount through the ELV Platform from their previous fiscal year. This estimate of cost savings was used for the child care center analysis. Hard data for discount office supplies was not provided for any of the family child care homes. All of the family child care homes interviewed said they rarely used the platform for office supplies due to minimum purchase requirements. An estimate of half of the potential discount, or 7.5 percent, was

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used to account for some cost savings for a family child care home. The benefits were discounted in the first year by 50 percent to account for the gradual increase in use.

Family Child Care Home (initial):  $\$10 \times 50 \text{ percent} = \$10$

Family Child Care Home (on-going):  $\$180 \times 1 \text{ employee} \times 7.5 \text{ percent} = \$10$

Child Care Center (initial):  $\$360 \times 50 \text{ percent} = \$180$

Child Care Center (on-going):  $\$180 \times 20 \text{ employees} \times 10 \text{ percent} = \$360$

**Food Purchases:** The ELV Platform includes discounts on purchases of food and snacks. The discounted purchases in this category differ from the vended meal program and food sponsorship benefits available to Tier II and Tier III Affiliates. An Affiliate has the option to choose whether or not they will purchase their own food and utilize the food purchases discount, or utilize a vended meal program service. This analysis assumes that a Tier I Affiliate will utilize the ELV Platform discount on food purchases and that Tier II and Tier III Affiliates will utilize a vended meal program. Therefore, this benefit only applies to the Tier I Affiliate. Discounts on food purchases are contingent on a minimum purchase of \$500. This requirement means that the typical family child care home will not be eligible for this benefit. Based on input from ELV, a typical center of the size assumed in this analysis utilizing this discount will likely spend at least \$3,000 per month on food purchases. The discount is an estimated 10 percent of this cost.

Child Care Center (initial, Tier I):  $\$3,600 \times 50 \text{ percent} = \$1,800$

Child Care Center (on-going, Tier I):  $\$36,000 \times 10 \text{ percent} = \$3,600$

**Janitorial and Kitchen Supplies:** This broad category was developed from discount purchases categories included in the Cost-Savings Tool and were added together because each had an estimated discount of 15 percent. This category included janitorial supplies and kitchen supplies. Only one respondent to the Cost-Savings Tool entered estimates for these categories. Based on this response, an estimate of about \$60 per child each year was derived. This estimate was applied to both the child care center and family child care home analyses. At the time of the interviews with Bal Swan, it was cumbersome for them to track their total expenditures and savings in these categories. Bal Swan's interviews also suggested that cost savings in these categories were not as significant to their operations as discounts for school and office supplies.

Although it appears that this benefit is not frequently used, a savings of 7.5 percent was applied as use may increase in the future. The benefits were discounted in the first year by 50 percent to account for the gradual increase in use.

Family Child Care Home (initial):  $\$30 \times 50 \text{ percent} = \$10$

Family Child Care Home (on-going):  $\$60 \times 6 \text{ children} \times 7.5 \text{ percent} = \$30$

Child Care Center (initial):  $\$320 \times 50 \text{ percent} = \$160$

Child Care Center (on-going):  $\$60 \times 72 \text{ children} \times 7.5 \text{ percent} = \$320$

**Other Supplies and Services:** This category includes items such as sanitary gloves, hygiene supplies, credit card fees, shipping and mailing discounts, marketing, job advertising, and other hiring costs. Only one respondent provided estimates for most of these categories from the three Cost-Savings Tool forms reviewed. Based on the response, a value of \$40 per child each year for the other supplies and services costs was estimated. About 50 percent of these costs were for credit card merchant fees. As these fees do not factor into the family child care

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home analysis, the estimate for the family child care home was reduced by half or about \$20 per child each year. In addition, the costs of credit card fees will be absorbed by the ELV Alliance for a Tier III center Affiliate utilizing billing services. Therefore, only \$20 per child was estimated for the Tier III child care center.

Based on the responses and the estimated discount for each category ranging from 15 percent to 50 percent, the average discount on these items was 33 percent. The full discount was applied to the child care center analysis and half of the discount was applied to the family child care home analysis. As the family child care homes do not utilize discount purchases often, the estimate of 16.5 percent may be generous. In addition, a family child care home will likely not utilize services such as job advertising and shipping and mailings.

However, a child care center is likely to advertise to try to attract families to their operation. Only one respondent estimated a cost of marketing in the Cost-Savings Tool for direct mailings. The cost of direct mailings based on this response yielded an estimated cost of \$14 per child each year. This cost and the savings associated with it was only applied to the child care center analysis. A family child care home is unlikely to engage in this type of marketing.

The estimated savings in the Cost-Savings Tool is 30 percent for direct mailings. As better data was not available for the savings in this category, this estimate was used for the child care center analysis.

The last area of discount purchases is for hiring and job advertisements. While this is a line item in the Cost-Savings Tool, none of the centers responded with an estimate. However, Bal Swan is an active user of job advertisement services and estimated that the cost of posting an ad before implementing the ELV services was about \$400. Based on the assumption that the typical child care center will hire about two employees per year, the cost to the center would be about \$800 each year. Bal Swan was also able to provide an estimate of the cost through the ELV Platform of about \$150 for a job posting, representing a savings of \$250 dollars per posting or a 62.5 percent discount.

The benefits were discounted in the first year by 50 percent to account for the gradual increase in use.

Family Child Care Home (initial):  $\$20 \times 50 \text{ percent} = \$10$

Family Child Care Home (on-going):  $\$20 \times 6 \text{ children} \times 16.5 \text{ percent} = \$20$

Child Care Center (initial, Tier I and Tier II):  $\$1,750 \times 50 \text{ percent} = \$880$

Child Care Center (on-going, Tier I and Tier II):  $(\$40 \times 72 \text{ children} \times 33 \text{ percent}) + (\$400 \times 2 \text{ ads} \times 62.5 \text{ percent}) + (\$14 \times 72 \text{ children} \times 30 \text{ percent}) = \$1,750$

Child Care Center (initial, Tier III):  $\$1,280 \times 50 \text{ percent} = \$640$

Child Care Center (on-going, Tier III):  $(\$20 \times 72 \text{ children} \times 33 \text{ percent}) + (\$400 \times 2 \text{ ads} \times 62.5 \text{ percent}) + (\$14 \times 72 \text{ children} \times 30 \text{ percent}) = \$1,280$

**Insurance Benefit Savings:** Insurance benefit cost savings were estimated based on responses from the Cost-Savings Tool and corroborated by high-level estimates from Bal Swan. ELV utilizes the payroll and human resources services of Automatic Data Processing, Inc. (ADP). ADP can save a child care center money by managing employee benefits and insurance products. Based on the responses from the three child care centers in the Cost-Savings Tool, the average cost per employee for a child care center is \$1,760 for insurance, workers compensation insurance, and other employee benefits. Payroll management costs are applicable for the child care centers only.

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The discount listed in the Cost-Savings Tool is 10 percent. At the time of the interview, Bal Swan did not have solid estimates on the amount of money they had saved from switching their payroll to ADP. However, Bal Swan mentioned that their health insurance costs increased eight percent through ADP rather than the 17 percent increase it would have been without ADP's services. The 10 percent rate from the Cost-Savings Tool appeared reasonable based on this feedback and was used to calculate the insurance benefit savings.

Child Care Center (initial & on-going):  $\$1,760 \times 20 \text{ employees} \times 10 \text{ percent} = \$3,520$

## *Tier II Direct Benefits*

Tier II direct benefits consist of the value of a laptop computer given to Tier II and Tier III Affiliates and food program savings. The computers are used to keep track of child records and attendance.

**Computer:** ELV estimates the value of the laptop computer provided to all of the Tier II and Tier III Affiliates is about \$200. The computer is a one-time benefit.

Family Child Care Home (initial, Tier II and Tier III): \$200

Child Care Center (initial, Tier II and Tier III): \$200

**Vended Meal Service Program:** ELV negotiates discounted rates for Tier II and Tier III Affiliates that utilize their food program sponsorship, amounting to about \$0.25 per child per day. Several of the Affiliates gave rough estimates of the amount of money saved through their Alliance's food program sponsorship. However, the best assumption for the cost savings in this category was the rate ELV provided. The estimate assumes food for five days per week for each child for 50 weeks. A family child care home is unlikely to utilize a vended meal service program.

Child Care Center (initial & on-going, Tier II and Tier III):  $\$0.25 \times 72 \text{ children} \times 5 \text{ days} \times 50 \text{ weeks} = \$4,500$

## *Billing Services*

Billing services benefits are comprised of the savings from reduced billing costs and from the ELV Alliance assuming the burden of credit card merchant fees for a Tier III Affiliate. These savings apply only to Tier III organizations.

**Billing Costs:** The Cost-Savings Tool includes a line item that estimates savings from reduced costs for CCCAP and private billing, collections, and reconciliation. Based on the responses of the three child care centers, an average cost of \$50 per child was derived. This estimate was applied to both the family child care home and the child care center analyses to estimate how much money the organizations would save if the ELV Alliance assumed all of these responsibilities and costs. The benefits were discounted in the first year by 50 percent to account for the gradual implementation in services.

Family Child Care Home (initial):  $\$300 \times 50 \text{ percent} = \$150$

Family Child Care Home (on-going):  $\$50 \times 6 \text{ children} = \$300$

Child Care Center (initial):  $\$3,600 \times 50 \text{ percent} = \$1,800$

Child Care Center (on-going):  $\$50 \times 72 \text{ children} = \$3,600$

**Credit Card Merchant Fees:** For the child care center, an elimination of credit card merchant fees represents a sizable benefit as the ELV Alliance assumes billing responsibilities. The cost of the merchant fees was estimated assuming that 30 percent of the children would pay by credit card and that the fee equaled three percent of the

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amount charged for tuition. The analysis assumes a family child care home will likely decline credit card payments and avoid credit card merchant fees. Therefore, this benefit is only estimated for a child care center. The benefits were discounted in the first year by 50 percent to account for the gradual implementation in services.

Child Care Center (initial):  $\$5,770 \times 50 \text{ percent} = \$2,890$

Child Care Center (on-going):  $(72 \text{ children} \times 30 \text{ percent} \times \$8,910 \times 3 \text{ percent}) = \$5,770$

## Indirect Benefits

### *Productivity and Time Savings*

Productivity and time savings benefits are comprised of four areas: savings through the ELV Platform, efficiencies gained from CORE, licensing compliance, and time savings from billing services opportunities. The value of the benefit is estimated as the amount of time saved multiplied by the average hourly wage.

**Time Savings (ELV Platform):** The time savings assumption for the ELV Platform was derived from the Cost-Savings Tool results. Respondents estimated the amount of time spent on the services offered through the ELV Platform prior to joining an Alliance and then the Cost-Savings Tool estimated the time spent after joining an Alliance. The time savings assumptions in the Cost-Savings Tool ranged from 50 percent to 80 percent depending on the category. Based on the total hours saved by the organizations, an estimate of time saved per employee was calculated. For the ELV Platform, an employee saved an estimated four hours each year. This result was applied to both the family child care home and child care center analyses for a total of four hours saved each year at a family child care home and 84 hours saved at a child care center. The Cost-Savings Tool categories used included staff time required for purchasing; time spent on job descriptions, interview guides, and performance reviews; time spent revising or creating an employee handbook; time spent on parent handbooks; time spent on program and staff policies and forms; and time spent on newsletter templates, permission slips, posters, postcards, and other mailing materials.

The interviews yielded several pieces of anecdotal data for time the providers saved through the ELV Platform, CORE, and billing services. One family child care home provider estimated that she saved about two hours per month through utilizing the ELV Platform and CORE. One child care center estimated that they saved the time of one FTE employee through billing services. Based on this anecdotal data, the estimates of time savings in the Cost-Savings Tool seemed reasonable. The benefits were discounted in the first year by 50 percent to account for the gradual implementation in services.

Family Child Care Home (initial):  $\$80 \times 50 \text{ percent} = \$40$

Family Child Care Home (on-going):  $\$19.13 \times 4 \text{ hours} \times 1 \text{ employee} = \$80$

Child Care Center (initial):  $\$1,460 \times 50 \text{ percent} = \$730$

Child Care Center (on-going):  $\$18.26 \times 4 \text{ hours} \times 20 \text{ employees} = \$1,460$

**Time Savings (CORE):** The time savings for a family child care home using CORE was estimated as two hours per month for both the ELV Platform and CORE as described above, minus four hours in estimated savings each year from the ELV Platform alone. Based on these assumptions, a family child care home saved 20 hours per year through CORE.

Time savings achieved through CORE for a child care center were derived from the Cost-Savings Tool results for time spent on child, parent, and staff files. Results indicated that providers reduced their hours on these activities by 80 percent with CORE. The results from the Cost-Savings Tool were estimated on a per employee basis and

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then averaged between the three child care centers to derive an estimate of four hours saved per employee, or 80 hours per child care center. The benefits were discounted in the first year by 50 percent to account for the gradual implementation in services.

Family Child Care Home (initial):  $\$380 \times 50 \text{ percent} = \$190$

Family Child Care Home (on-going):  $(\$19.13 \times (24 \text{ hours} - 4 \text{ hours}) \times 1 \text{ employee}) = \$380$

Child Care Center (initial):  $\$1,460 \times 50 \text{ percent} = \$730$

Child Care Center (on-going):  $\$18.26 \times 4 \text{ hours} \times 20 \text{ employees} = \$1,460$

**Time Savings (Licensing):** Time savings achieved through licensing for the family child care home and the child care center were derived from the Cost-Savings Tool results for time spent on licensing compliance. Results indicated that providers reduced their hours on these activities by 80 percent with CORE. The results from the Cost-Savings Tool were estimated on a per employee basis and then averaged between the three child care centers to derive an estimate of four hours saved per employee, or four hours for a family child care home and 80 hours for a child care center. The benefits were discounted in the first year by 50 percent to account for the gradual implementation in services.

Family Child Care Home (initial):  $\$80 \times 50 \text{ percent} = \$40$

Family Child Care Home (on-going):  $\$19.13 \times 4 \text{ hours} = \$80$

Child Care Center (initial):  $\$1,460 \times 50 \text{ percent} = \$730$

Child Care Center (on-going):  $\$18.26 \times 4 \text{ hours} \times 20 \text{ employees} = \$1,460$

**Time Savings (Billing Services):** Time Savings from billing services were derived from the Cost-Savings Tool and estimated on a per child basis. The estimated time saved, two hours per child, was applied to both the family child care home and child care center analyses. Better data for a family child care home utilizing billing services was not available. Time savings categories in the Cost-Savings Tool for billing included CCCAP billing and reconciliation, private tuition billing, private tuition collection, and CACFP reporting. The estimated savings was 80 percent for each of these categories. Based on the assumptions for billing services, a family child care home saved an estimated 14 hours each year through participation in billing services and a child care center saved an estimated 144 hours. The benefits were discounted in the first year by 50 percent to account for the gradual implementation in services.

Family Child Care Home (initial):  $\$230 \times 50 \text{ percent} = \$110$

Family Child Care Home (on-going):  $\$19.13 \times 2 \text{ hours} \times 6 \text{ children} = \$230$

Child Care Center (initial):  $\$2,630 \times 50 \text{ percent} = 1,310$

Child Care Center (on-going):  $\$18.26 \times 2 \text{ hours} \times 72 \text{ children} = \$2,630$

## *Value of ELV Alliance Services*

The value to a child care provider of services offered by the Alliance includes the value of technical assistance, training opportunities, quality improvements, food program sponsorship, and billing services. These items represent a real benefit for the Affiliate child care provider as they take advantage of the time and professional experience of the staff of the ELV Alliance. Most of these categories were estimated from responses to questions by the former director of ELV Alliance @ ACECC.

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**Value of Technical Assistance:** Based on the director's responses to questions about her operations at ELV Alliance @ ACECC, an estimated 3.5 Affiliates utilized technical assistance each day with an average of 0.5 hours spent per Affiliate. This was multiplied by an average hourly wage of about \$20 based on the ELV Alliance @ ACECC financial model. This result was divided by the number of ELV Alliance @ ACECC Affiliates (44 at the time), yielding an estimated \$200 in technical assistance per Affiliate each year.

Family Child Care Home (initial & on-going):  $(3.5 \text{ affiliates} \times 0.5 \text{ hours} \times \$20 \text{ hourly wage} \times 5 \text{ days} \times 50 \text{ weeks}) / 44 \text{ affiliates} = \$200$

Child Care Center (initial & on-going):  $(3.5 \text{ affiliates} \times 0.5 \text{ hours} \times \$20 \text{ hourly wage} \times 5 \text{ days} \times 50 \text{ weeks}) / 44 \text{ affiliates} = \$200$

**Value of Training Opportunities:** ELV Alliance @ ACECC and the other Alliances offered regular opportunities for Affiliates to receive training at a group level, usually held in the evenings. ELV Alliance @ ACECC offered quarterly trainings for their Affiliates' directors that lasted about two hours and there were also training events for teachers. The value of the Alliance's time, food, and supplies provided for the events were added together and estimated for each Affiliate based on the attendance at those meetings. Overall, an average value of about \$70 per year was found for family child care homes and \$120 per year was estimated for child care centers. The benefits were discounted in the first year by 50 percent to account for the gradual implementation in services.

Family Child Care Home (initial):  $\$70 \times 50 \text{ percent} = \$40$

Family Child Care Home (on-going):  $\$190 / 21 \text{ Affiliates} \times 4 \text{ events} \times 2 \text{ hours} = \$70$

Child Care Center (initial):  $\$120 \times 50 \text{ percent} = \$60$

Child Care Center (on-going):  $(\$190 / 21 \text{ Affiliates} \times 4 \text{ events} \times 2 \text{ hours}) + (\$230 / 25 \text{ attendees} \times 2 \text{ hours}) \times 11.1 \text{ hours} = \$120$

**Value of Quality Improvements:** ELV Alliance @ ACECC offered quality improvement events. One such event was a parent educational event. Based on the cost of the event to ELV Alliance @ ACECC for planning, setup and takedown, food, trainers, child care, a translator, and materials, the value of the event to each attendee was estimated. Based on an assumption that the typical Affiliate would participate in one of these events each year, the value to the Affiliate was an estimated \$80.

Family Child Care Home (initial & on-going):  $\$1,770 \text{ event cost} / 25 \text{ families} \times 1.19 \text{ families per Affiliate} = \$80$

Child Care Center (initial & on-going):  $\$1,770 \text{ event cost} / 25 \text{ families} \times 1.19 \text{ families per Affiliate} = \$80$

**Value of Quality Rating Improvement System Assistance:** ELV estimates an ELV Alliance will support a portion of the cost of obtaining a QRIS rating for its participating Affiliates. ELV estimated that a reasonable level of assistance would be about 10 percent of the Alliance's revenue. Based on the assumptions in the model, the QRIS assistance for all of the Alliance's Affiliates would total about \$56,360. This value was weighted between family child care home Affiliates and child care center Affiliates based on the number of FTE children in each that the typical Alliance serves, about 2,664 for Tier II and Tier III Affiliates. The portion for family child care homes and child care centers was divided by the number of Affiliates in each. The cost of the QRIS is annualized based on receiving quality rating assistance every other year.

Family Child Care Home (initial, Tier II & Tier III):  $\$56,360 \times (72 / 2,664 \text{ children}) / 12 \text{ Affiliates} = \$130$

Family Child Care Home (on-going, Tier II & Tier III):  $\$130 \times 50 \text{ percent} = \$60$

# APPENDIX II: ASSUMPTIONS DETAIL

Child Care Center (initial, Tier II & Tier III):  $\$56,360 \times (2,592 / 2,664 \text{ children}) / 36 \text{ Affiliates} = \$1,520$

Child Care Center (on-going, Tier II & Tier III):  $\$1,520 \times 50 \text{ percent} = \$760$

**Value of Vended Meal Service Sponsorship:** The director at ELV Alliance @ ACECC spent an estimated 21 hours each year aiding an affiliate with food and the Child and Adult Care Food Program (CACFP), which included three, three-hour compliance visits each year. As a family child care home is assumed to not use a vended meal service program, no benefit was calculated for the typical family child care home analysis.

Child Care Center (initial & on-going, Tier II & Tier III):  $\$20 \times (12 \text{ hours} + (3 \text{ hours} \times 3 \text{ visits})) = \$420$

**Value of Billing Services (ELV Alliance):** Based on the ELV Alliance @ ACECC financial model with three billing specialists, each billing specialist handled about \$1.6 million of billing. Therefore, a typical family child care home with \$41,220 of billing would utilize about 2.6 percent of a billing specialist's time. Based on an average annual wage of \$41,700 derived from the ELV Alliance @ ACCC financial model, the value to the family child care home would total about \$1,100 each year. A typical child care center with \$641,520 of billing would require about 41 percent of a billing specialist's time or a value of about \$17,160 each year. The benefits were discounted in the first year by 50 percent to account for the gradual implementation in services.

It should be noted that the family child care homes and child care centers that will find the most value in ELV Alliance's billing services are those with a large proportion of children that utilize CCCAP and other third parties to subsidize their tuition. Based on ELV's experience, the providers that utilize billing services often have a high percentage of subsidized children, upwards of 50 to 60 percent. The benefits of billing services are dependent on the individual circumstances of each child care business. These circumstances need to be considered when determining the provider's potential returns.

Family Child Care Home (initial):  $\$1,100 \times 50 \text{ percent} = \$550$

Family Child Care Home (on-going):  $\$41,220 / \$1,557,330 \times \$41,700 = \$1,100$

Child Care Center (initial):  $\$17,160 \times 50 \text{ percent} = \$8,580$

Child Care Center (on-going):  $\$641,520 / \$1,557,330 \times \$41,700 = \$17,160$

## *Indirect Cost Savings*

Indirect cost savings benefits are estimated as the difference between the cost of online trainings and a child management system through ELV and the cost of these same services elsewhere.

**Online Training:** In Colorado, child care providers are required to receive 15 hours of training each year for their child care license. ELV offers trainings that can qualify for 12 of the 15 required hours. Other than ELV training, providers receive their training via trade conferences and community college classes. A value of \$30 per hour was assigned to online training outside of ELV. Based on this assumption, the value of 12 hours of online training is worth \$360 to a family child care home and \$7,560 to a child care center. The benefits were discounted in the first year by 50 percent for the child care center to account for the gradual implementation in services.

Family Child Care Home (initial & on-going):  $\$30 \times 12 \text{ hours} \times 1 \text{ employee} = \$360$

Child Care Center (initial):  $\$7,200 \times 50 \text{ percent} = \$3,600$

Child Care Center (on-going):  $\$30 \times 12 \text{ hours} \times 20 \text{ employees} = \$7,200$

# APPENDIX II: ASSUMPTIONS DETAIL

**Child Management System Savings:** Child Management Systems are costly so an Affiliate of an ELV Alliance can save a significant amount of money through CORE. However, based on interviews, only a child care center is likely to purchase a child management system. Thus, an indirect cost savings benefit for this category is only calculated for the typical child care center. Based on input from ELV, a child management system such as Procure costs an estimated \$2,500 each year for the program and technical assistance for the typical child care center.

Child Care Center (initial & on-going): \$2,500

## ELV Alliance Revenues and Expenses

The ELV Alliance analysis includes factors such as the number of employees at the Alliance, the number and type of Affiliates, the Affiliate fees for each level of service, and the expenses for an Alliance based on the ELV Alliance @ ACECC financial model.

**Revenues:** After ELV reviewed an initial draft of the model's data, an Affiliate mix weighted more heavily toward child care centers was determined to reflect a typical Alliance composition. The mix is assumed to be 25 percent family child care homes and 75 percent child care centers. The Affiliate mix was assumed to be 40 percent in Tier I, 40 percent in Tier II, and 20 percent in Tier III. Based on the fee structure presented in the Affiliate Fees section (page 31), total revenue for the Alliance was estimated.

**Expenses:** Each Alliance is assumed to employ six FTE employees, including a program manager, accounts coordinator, three billing specialists, and an ELV Alliance coach. The ELV Alliance @ ACECC financial model was based on 6.52 FTE employees at full capacity consisting of the six FTE's noted above plus a 0.5 FTE enrollment specialist and 0.02 FTE employees for time spent in two positions by a director of programs and for office administration. To simplify the analysis and to mirror what seemed to be the best fit of an Alliance in practice, the analysis was adjusted to reflect six FTE employees. The ELV Alliance @ ACECC expenses were estimated on a per employee basis and then applied to the six employees. Expense categories were taken directly from the financial model. After the initial review, it was determined that quality ratings assistance for the Affiliates was left out of the Alliance's expenses. An amount equal to 10 percent of the Alliance's Affiliate fee revenue was used to approximate how much ratings assistance would be provided to the organization's Affiliates.

The actual revenues and expenses of an ELV Alliance could vary considerably depending upon Affiliate mix, cost structure, and other factors.

# APPENDIX III: LITERATURE REVIEW

Bruner, Charles, Sheri Floyd, and Abby Copeman. "Seven Things Policy Makers Need to Know about School Readiness: Investments Pay Off." SECPTAN, School Readiness Briefing Paper 7, 2005.  
<http://www.finebynine.org/uploaded/file/Briefing%20Paper%207.pdf>

This paper summarizes the findings and costs/benefits found in several well known and oft-cited studies including the Perry School Program, the Abecedarian Project, the Parent/Early Infancy Project, and the Chicago Parent-Child programs. One finding found that for every dollar invested in the education and development of school-aged children and for every 70 cents invested in college-aged youth, less than 14 cents is invested in the early learning and preschool years.

Chase, Richard and Paul Anton. "Cost Savings Analysis of School Readiness in Michigan." Wilder Research, Great Start, November 2009.  
[http://greatstartforkids.org/sites/default/files/file/Studies/Wilder%20Full%20Report%20Final%20\\_VO1\\_2010\\_1\\_21.pdf](http://greatstartforkids.org/sites/default/files/file/Studies/Wilder%20Full%20Report%20Final%20_VO1_2010_1_21.pdf)

This study estimates the cost savings and revenue from investments in school readiness in Michigan for over 25 years. This includes returns in the K-12 school system, reduced government spending and increased tax revenues, and reduced social costs to the public. The authors mention that an estimated 80,000 adults aged 18 to 29 in the labor force are high school graduates that would likely have dropped out of school without the school readiness initiatives. Also included is an estimate of how many low-income, four-year-old children in Michigan are eligible for the program but are not currently served by Great Start or Head Start.

Heckman, James J. and Dimitriy V. Masterov. "The Productivity Argument for Investing in Young Children." University of Chicago, 2004.  
[http://jenni.uchicago.edu/human-inequality/papers/Heckman\\_final\\_all\\_wp\\_2007-03-22c\\_jsb.pdf](http://jenni.uchicago.edu/human-inequality/papers/Heckman_final_all_wp_2007-03-22c_jsb.pdf)

The authors summarize their intent succinctly in the introductory paragraphs, "...most analyses have cast the issue of assisting children from disadvantaged families as a question of fairness or social justice. This paper makes a different argument. We argue that, on productivity grounds, it makes sense to invest in young children from disadvantaged environments." The paper also mentions that research is continually showing that early childhood interventions for disadvantaged young children are more effective than those that come later in life. The paper advocates a thoroughly vetted intervention as voluntary involvement with preschool centers available to disadvantaged children coupled with home visitation programs. The authors' analysis of cost-benefit research finds that the estimated rate of return is 16 percent, including four percent for participants and 12 percent for society. Included in the analysis is a discussion of U.S. workforce trends, literacy and numeracy, and crime. The authors' analysis included estimates of the cost of three well-known childcare programs in current (2004) dollars including the Perry School Program, the Abecedarian Program, and the Chicago Parent-Child Program.

# APPENDIX III: LITERATURE REVIEW

Karoly, Lynn A., Jill S. Cannon, and M. Rebecca Kilburn. “Early Childhood Interventions: Proven Results, Future Promise.” RAND Corporation, 2005.  
[http://www.rand.org/pubs/monographs/2005/RAND\\_MG341.pdf](http://www.rand.org/pubs/monographs/2005/RAND_MG341.pdf)

This comprehensive 201-page report establishes the foundation for investments in early childhood care, the types of early intervention programs, and the potential outcomes from those investments. The authors focused on programs designed to improve cognitive or socioeconomic development as opposed to programs for physical health or special needs. Of note is the authors’ focus on returns to society. The authors give three examples of program features that recur throughout the successful programs: better-trained caregivers; smaller child-to-staff ratios; and greater intensity of services. The authors caution that while many of the studies they reviewed showed economic payoff is possible, the type and quality of care could have a huge effect on the results and do not guarantee a positive benefit for all types of care.

Rolnick, Art and Rob Grunewald. “Early Childhood Development: Economic Development with a High Public Return.” Federal Reserve Bank of Minneapolis, December 2003.  
[http://www.minneapolisfed.org/publications\\_paper/studies/earlychild/abc-part2.pdf](http://www.minneapolisfed.org/publications_paper/studies/earlychild/abc-part2.pdf)

This study makes the case that investment in early childhood development (ECD) yields higher returns than most other public or private investments. The paper notes that the economic case for public education in general is strong, but is lacking for ECD. The paper calls attention to the issue of public funding for ECD. The authors make the case that ECD is underfunded, the benefits exceed the costs for investments in ECD, and that the ROI for ECD exceeds the returns on other types of economic development investments. This study includes a summary of the Perry School program, an oft-cited longitudinal study of the outcomes from preschool. While the Perry project did not find any long term IQ differences between participants and a control group, the participants were less likely to be placed in special education, high school graduation rates were 20 percentage points higher than the control group, age 27 earnings were higher than the control group, and only one-fifth as many program participants as nonparticipants were arrested five or more times by age 27. Overall, the Perry project estimated a real internal rate of return to the public of 12 percent.

Schaefer, Stephanie, Susan L. Gates, and Mike Keirnan. “Strengthening Michigan Businesses through Investments in Early Care and Education.” America’s Edge, Great Start, 2011.  
<http://greatstartforkids.org/sites/default/files/file/Studies/America’s%20Edge%20Report%20on%20Michigan.pdf>

This study estimates the return to local businesses for investments in early care and education in Michigan compared with eight other industry sectors and found that investment in early care and education returned more than construction, retail trade, manufacturing, transportation, and utilities. The study also makes a connection between parent absenteeism from work for child care problems and the cost to business, estimated to be about \$3 billion a year for all U.S. businesses. The analysis was based on economic modeling through IMPLAN.

# APPENDIX III: LITERATURE REVIEW

Stoney, Louise. “Shared Services: A New Business Model to Support Scale and Sustainability in Early Care and Education.” David & Laura Merage Foundation, Early Learning Ventures, 2009.  
<http://www.earlylearningventures.org/Shared-Services/Shared-Services-Toolkit/Shared-Services-101.aspx>

Many childcare providers struggle with maintaining or raising their quality of service. Steps to boost quality include attracting and retaining qualified staff, implementing an effective curriculum, and conducting child care assessments. Shared Services can help preserve providers’ autonomy and diversity while allowing them to tap into economies of scale and reduced business costs. Stoney provides the support for quality early childhood care and education and the ways a shared services model can contribute to a sound and effective childcare business.

Stoney, Louise, Anne Mitchell, and Mildred Warner. “Smarter Reform: Moving Beyond Single-Program Solutions to an Early Care and Education System.” Cornell University, Restructuring Local Government, 2006.  
<http://government.cce.cornell.edu/doc/pdf/101-115%20stoney/%20mitchell%20warner.pdf>

This study starts with some critiques of early childcare research and programs. Notable is the critique that cost-benefit analysis is often focused on public investments in three- to four-year-old children rather than from birth. Further, research on economic returns from ECE investments usually focus on poor children, who the authors feel is too narrow of an analysis and creates focus on programs for at-risk kids rather than broad-based programs for many types of families. The study establishes criteria for measuring quality including structure, staff qualifications and characteristics, and program dynamics. The study argues for universal accessibility to childcare for all levels of income.

Warner, Mildred. “G. (Not) Valuing Care: A Review of Recent Popular Economic Reports on Preschool in the U.S.” Cornell University, Restructuring Local Government, 2009.  
<http://government.cce.cornell.edu/doc/pdf/NotValuingCare.pdf>

This paper is a review by the author of several studies of early childhood education and care. The studies come from a series of reports called “Invest in Kids (IIK).” One of the reports describes a concept called the “public finance value” of childcare as it relates to investments in preschool. The reports date from 2003-2006 and include reports from the OECD, Heckman, and Gokhale, among others.

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