THE ECONOMIC IMPACT OF THE CHILD CARE INDUSTRY IN JEFFERSON & HARDIN COUNTIES

SPONSORED BY

COMMUNITY COORDINATED CHILD CARE (4-C)

AND PREPARED BY THE

NATIONAL ECONOMIC DEVELOPMENT AND LAW CENTER

BACKGROUND

THE ECONOMIC IMPACT OF THE CHILD CARE INDUSTRY IN JEFFERSON AND HARDIN COUNTIES

Since 1997 the National Economic Development and Law Center (NEDLC) has produced Child Care Economic Impact Reports (CCEIRs) in counties and states throughout the country. The CCEIRs articulate child care in economic development terms and quantify the ways in which the child care industry is critical to the local economy. The CCEIRs help build local partnerships aimed at increasing the child care industry's capacity to respond to the shifting child care needs of working families. Community Coordinated Child Care (4-C) partnered with NEDLC to form an Advisory Board of local and statewide leaders in the fields of business, government, child care, and economic development.

ACKNOWLEDGMENTS

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NATIONAL ECONOMIC DEVELOPMENT AND LAW CENTER

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

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INTRODUCTION

Policy makers, business leaders, urban planners, and a host of other community leaders continuously discuss ways to improve the economic vitality and quality of life for families in Jefferson and Hardin counties. The child care industry must be included in this economic planning and analysis because it is an important aspect of both counties' economies. This report is a tool to bridge the gap between economic development planning and child care advocacy, demonstrating that child care is a critical component for any comprehensive plan for sustained economic development in local communities.

Why Focus On Child Care?

- ***The child care industry is a major industry in its own right.*** Research presented in this report demonstrates that licensed child care is a significant income-generating, job-creating industry. In Jefferson County, child care employs more people than other major industries in the county, such as beverage and tobacco manufacturing and horse race tracks. In Hardin County, there are more child care professionals than public elementary school teachers and staff. Jefferson and Hardin counties' licensed child care industry directly employs 3,840 people and 438 people, respectively. Lastly, the child care industry in Jefferson and Hardin counties generates approximately $119.8 million and $14.9 million per year in gross receipts respectively.[1]

- ***Child care is essential in enabling parents to work***. The nature of working America has changed dramatically since the 1950's, and child care has changed with it. Parents are joining the labor force in record high numbers and are returning to work more quickly following the birth of each child. In Jefferson County, approximately 35,000 children under six have all parents in the labor force, and over 46,000 children ages 6 to 13 have all parents working, representing 62 percent and 70 percent of all children in their respective age groups. Similarly, over 11,000 children ages 0 to 12 in Hardin County need some form of care because their parents are in the labor force.[2]

> Currently in Jefferson County almost 81,000 children ages 0 to 12 need some form of care because their parents are in the labor force.

> In Hardin County, 11,000 children need some form of care.

- ***High-quality child care ensures a strong economy in the future***. Historically, child care has been perceived primarily as a social service or, at best, an educational service for parents who want (and can afford) to provide their children with early learning experiences. Recent research on early brain development demonstrates that, far from being a luxury, child care is a vital development service, improving children's health, school readiness, and contribution to society. Child care also creates external economic and societal benefits for Jefferson and Hardin counties by reducing future public sector spending in critical areas, including the criminal justice and educational system and increasing tax revenues through increased employment. Cost-

> The child care industry:
> - Enables parents to work and be more productive in their jobs
> - Ensures a strong future workforce.
> - Is a major industry in its own right

[1] See Section 3 for further discussion of results and methodology.
[2] U.S. Census Bureau, Census 2000.

benefit analyses of three long-term studies indicate that every dollar spent on quality child care results in as much as seven dollars in future public savings.[3]

Despite the industry's economic significance, it is unable to meet the increasing need for affordable child care services and faces a number of barriers, including high costs, low wages, and high turnover—all of which create an unstable child care industry. Child care, by creating benefits for society at large, is a public good. However, parents of young children rarely have the income necessary to pay for the complete costs of child care. Therefore, it is imperative that traditional and non-traditional stakeholders develop comprehensive investment strategies to ensure affordable, quality child care.

This report presents a wide range of compelling evidence showing that investments in the child care infrastructure have direct, positive effects on the ability of the local economy to experience growth and vitality. The report also demonstrates that an intimate understanding of the interaction between child care supply and economic growth improves the efficiency of investments in child care, and saves both private and public expenditures, directly and indirectly. To cast child care in an economic development light, this report:

- Quantifies the local economic effects of the licensed child care industry in Jefferson and Hardin counties
- Assesses the extent to which child care currently supports the economy of both counties
- Discusses other economic benefits of child care, including public sector savings that result from investments in quality child care

Why Focus On Jefferson and Hardin Counties?

While the size of each county is significantly different (Jefferson has 698,000 residents and Hardin has 96,000 residents),[4] Jefferson and Hardin counties have many things in common:

- Jefferson and Hardin counties are both economic engines and job magnets for the Louisville Economic Area, which includes 23 counties surrounding the city of Louisville.
- Jefferson and Hardin counties are the two largest counties in the service area for Community Coordinated Child Care (4-C), the regional resource and referral (R&R) agency.

DEFINING CHILD CARE

For the purposes of this report licensed child care *includes* licensed family child care homes, child care centers, but *does not include* Head Start programs and State Pre-schools.

Child care includes a range of services that educate and nurture young children and enable parents to work or attend school. For the purposes of this report, child care includes full-day and part-day child development programs for young and school-age children, such as licensed family child care homes (Certified and Type II), and child care centers (Type I). Head Start and State Pre-schools *are not included in this economic analysis* because the resource and referral (R&R) database does not contain capacity/enrollment information for these programs.

Child care may be licensed or license-exempt. *Licensed child care* meets minimum health and safety standards and staff-child ratios set by the state legislature and regulated by

[3] Barnett, Steven, W. *Some simple economics of preschool education.* Presented at the Early Childhood Municipal Leadership Academy, sponsored by the Institute for Youth, Education, and Families, National League of Cities, Alexandria, VA, April, 2002.
[4] U.S. Census Bureau. Census 2000.

Kentucky's Division of Licensed Child Care, Inspector General's Office/Health Cabinet. Licensed establishments include most child care centers and many home-based providers, or "family child care homes." Family child care homes are licensed or certified, depending on the number and ages of children served. Small family child care homes serve between 4 and 6 children, and large family child care homes can serve between 7 and 12 children. Homes serving less than four children do not need a license and therefore fall under *license exempt child care.*

Licensed child care establishments, especially child care centers, must make capital investments in buildings and equipment in order to meet state standards. They must also cover employee salaries and benefits that attract and retain educated, credentialed staff. In short, licensed child care must meet state criteria for quality while maintaining a viable business.

In contrast, *license-exempt child care* generally is not regulated by the state and is not governed by any specific child care standards. License-exempt child care services include nannies, babysitters, parent cooperatives, relative care, and some formal home-based care arrangements. In addition, certain before- or after-school programs for school-age children in public and private schools are exempt, as well as certain public and private recreation programs.

Analyses in this report exclude legally unlicensed care by nannies, babysitters, or relatives, making the economic estimates conservative in terms of the full impact of the child care industry.

Because licensed child care is a formal part of the economy (i.e., the sector is subject to taxes, state regulations, etc), its economic impact is more easily quantified. Although unlicensed child care arrangements are widely used, and thus also add much to the economy, it is more difficult to track and ascertain their impact. Therefore, this report focuses on licensed care.

Defining high quality child care can often be difficult, even for experts in the field of early care and education. Kentucky Invests in Developing Success (KIDS Now) developed a child care quality rating system called *STARS for KIDS Now.* This system assesses the quality of child care based on staff-to-child ratios, educational and training attainment of staff, parental involvement, and age appropriate curriculum planning and the overall child care environment.[5]

STARS: Kentucky's Voluntary Child Care Quality Rating System

ONE STAR: One Star centers and family child care homes show their commitment to quality by entering the STARS system. The programs exceed the requirements for licensing/certification.

TWO STARS: Two Star centers and family child care homes must meet the requirements for level one, plus have staff that are receiving additional early childhood development training, have families involved in their child's program and have proven to be committed to quality by obtaining a minimum score on an Environmental Rating Scale (ERS) for child care programs.

THREE STARS: Three Star centers and family child care homes must meet all requirements for level two and meet increased educational and early childhood development training required for staff, have increased family involvement, have a higher ERS score, and lower staff to child ratios.

FOUR STARS: Four Star centers and family child care homes are nationally accredited. In addition, they exceed level three requirements for both educational and early childhood development training for staff, ERS scores, and staff to child ratios.

[5] Kids NOW. *Looking for the STARS When Choosing Child Care: STARS for Kids NOW, Kentucky's Voluntary Child Care Quality Rating System.*

OUTLINE OF THE REPORT

Following the introduction presented in **Section 1**, **Section 2** reviews current and projected economic and demographic trends in Jefferson County, Hardin County, and the Louisville Economic Area. The section also suggests implications these trends have on the region's child care industry.

Section 3 measures the overall economic effects of child care by the size of the industry in terms of both output and employment, discusses the methodology behind the measurement, and assesses several other features of the child care industry that affect its size and performance.

Section 4 discusses the role of the child care industry as it relates to economic development within Jefferson and Hardin counties. It outlines public and private strategies that can be used to ensure that there is an affordable, quality, and accessible child care infrastructure. In addition, the section analyzes the impact child care has on economic competitiveness and worker productivity and output. It discusses other economic benefits of child care including: public sector savings that result from investments in quality child care; the impact of child care on increasing school readiness and academic success; the development of the future workforce, and the maintenance of the county's high quality of life standards.

The report concludes with **Section 5**, which provides recommendations based upon the concepts articulated in this report. It suggests key areas for policymakers, business and civic leaders, economic development planners, and child care advocates to consider when planning for local urban and economic development activities.

Demographic and Economic Profile of Jefferson and Hardin Counties

Both Jefferson and Hardin counties are economic engines and job magnets for the larger Louisville Economic Area, which spans 16 counties in Kentucky and 7 counties in Indiana. While population growth within Jefferson and Hardin counties has been modest, the Louisville Economic Area's population growth has increased significantly from 1990 to 2002. The counties are also becoming more diverse, with the fastest growing segments of the population being Hispanics/Latinos and African Americans/ Blacks. Also, the Louisville Economic Area has seen unprecedented economic growth over the last decade, adding a net of 166,000 jobs from 1990 to 2000.

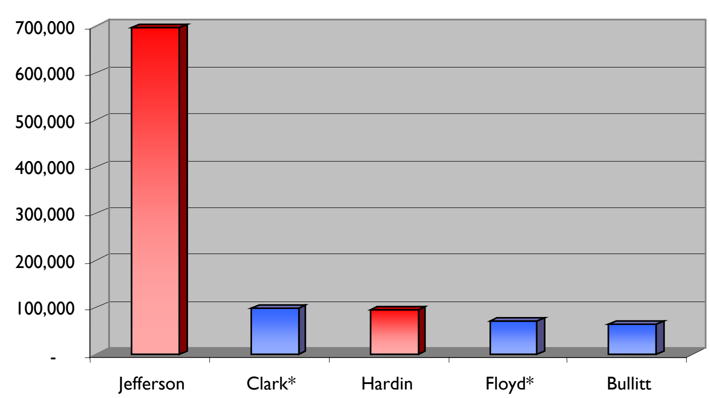
The following six demographic and economic trends have significant implications for child care leaders, economic development planners, government officials and other key stakeholders in Jefferson and Hardin counties:

- Increased population growth
- Increased diversity
- Economic expansion
- Increased female labor force participation
- Shortage of a skilled workforce
- Jefferson and Hardin counties are job magnets for the larger Louisville Economic Area

POPULATION

With almost 700,000 residents in 2002, Jefferson County is by far the largest county in Kentucky and one of the top 75 largest counties in the nation. Due to the merger of the Louisville and Jefferson County governments, Louisville is now the 16th largest city in the United States—larger than Nashville, Memphis, and Cincinnati. With approximately 96,000 residents, Hardin County is the third largest county in the Louisville Economic Area (see Figure 1).[6] From 1990 to 2002, Jefferson and Hardin counties' population increased five and seven percent respectively.[7]

Figure 1
Population of the Five Largest Counties in the Louisville Economic Area, 2002



* Counties in Indiana

[6] U.S Census Bureau. Census 2000.

Because Jefferson and Hardin counties are the source of many jobs and attract workers from the Louisville Economic Area, it is important to assess the demographic trends of the larger region. Employees who commute to Jefferson and Hardin counties sometimes prefer child care near their jobs; therefore, population growth in the surrounding Louisville Economic Area creates increased demand for child care services within Jefferson and Hardin counties.

The Louisville Economic Area
Defined by the Bureau of Economic Analysis (BEA), the area represents Louisville's labor shed or the area from which people commute. It consists of the following 16 counties in Kentucky and the following 7 counties in Indiana.

- *Kentucky*: Breckenridge, Bullitt, Carroll, Grayson, Hardin, Henry, Jefferson, Larue, Marion, Meade, Nelson, Oldham, Shelby, Spencer, Trimble, and Washington.
- *Indiana*: Clark, Crawford, Floyd, Harrison, Jefferson, Scott, and Washington.

The Louisville Economic Area's population has the following characteristics:

- The area's population grew 11 percent from 1990 to 2002.[8]
- Child birth is the major driver of population growth. From 2000 to 2002, the area's natural population increase (the difference between the number of births and deaths) was over 12,000 residents—twice the amount of new residents coming from immigration and migration.[9]
- Current projections reveal that the area will have 105,000 children under age five by 2020.[10]
- From 2000 to 2020, the region's population is expected to grow an estimated 14 percent, with over 1.6 million people.[11]

Jefferson and Hardin counties' population is projected to increase 5 and 12 percent respectively from 2000 to 2020.[12] In light of the projected growth for the Louisville Economic Area, child care needs within Jefferson and Hardin counties are expected to increase.

There are almost 302,000 children 14 and under in the Louisville Economic Area.

In Jefferson and Hardin counties, children under 14 years old comprise nearly 20 and 23 percent of the total population respectively (142,000 in Jefferson County and 22,000 in Hardin County). Additionally, there are almost 302,000 children 14 and under in the Louisville Economic Area, accounting for over one-fifth of the general population.[13]

In Jefferson and Hardin counties, the size of the population ages 16 to 64, the population that makes up the majority of the workforce, is projected to contract significantly from 2002 to 2030. In 2002, residents ages 16 to 64 accounted for 65 percent of Jefferson's general population

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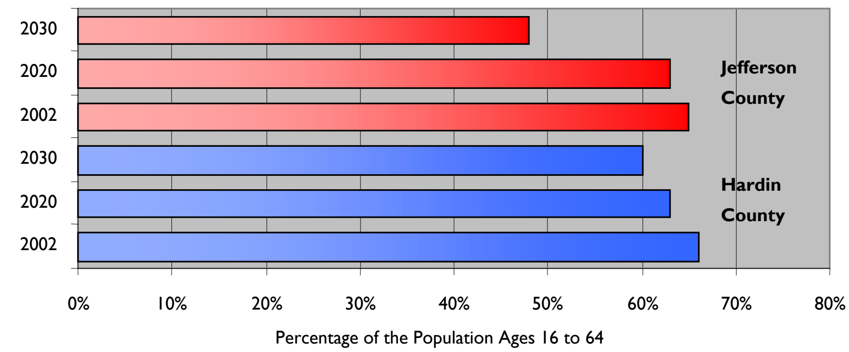
[7] U.S. Census Bureau. Census 2000.
[8] Ibid.
[9] U.S. Census Bureau. Components of Population Change By County, Births, Deaths, Migration, 2000-2002. Jefferson and Hardin County's populations experienced similar trends.
[10] University of Louisville, Kentucky State Data Center. *Kentucky and Counties Population Projection 2005-2030, June 2003.* Indiana Business Research Center, Stats Indiana. *Population of Indiana Counties, 2000 to 2020, 1998.*
[11] Ibid.
[12] Ibid.
[13] U.S. Census Bureau. Census 2000.

and 66 percent of Hardin's general population. By 2030, this population is projected to account for just 48 and 60 percent of Jefferson and Hardin's respective populations (see Figure 2).[14]

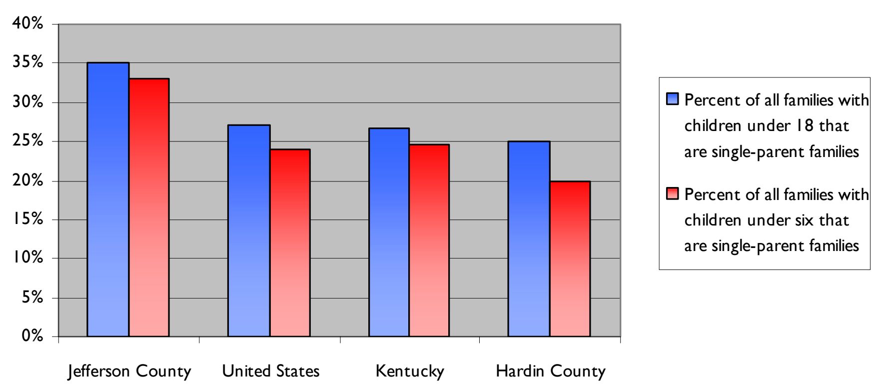
Figure 2
Proportion of the Total Population,
Residents Ages 16 to 64
Jefferson & Hardin Counties, 2002-2030



Jefferson and Hardin's regional and local population continues to grow, creating a demand for the entire educational system including child care. The population of residents of ages 16 to 64 is projected to contract significantly. An affordable and accessible child care infrastructure is needed to attract working families to the region.

Single-parent families with children, the family-type that is most dependent on child care, are prevalent in Jefferson County (see Figure 3). Of the 86,000 families with children under 18 years old in Jefferson County, over 35 percent are single-parent families.[15] In addition, nearly one-quarter of Hardin County's families with children are single-parent families (see Figure 3).

Figure 3
Single-Parent Families, Jefferson County, 2000



[14] University of Louisville, Kentucky State Data Center. *Kentucky and Counties Population Projection 2005-2030, June 2003.*
[15] U.S. Census Bureau. Census 2000.

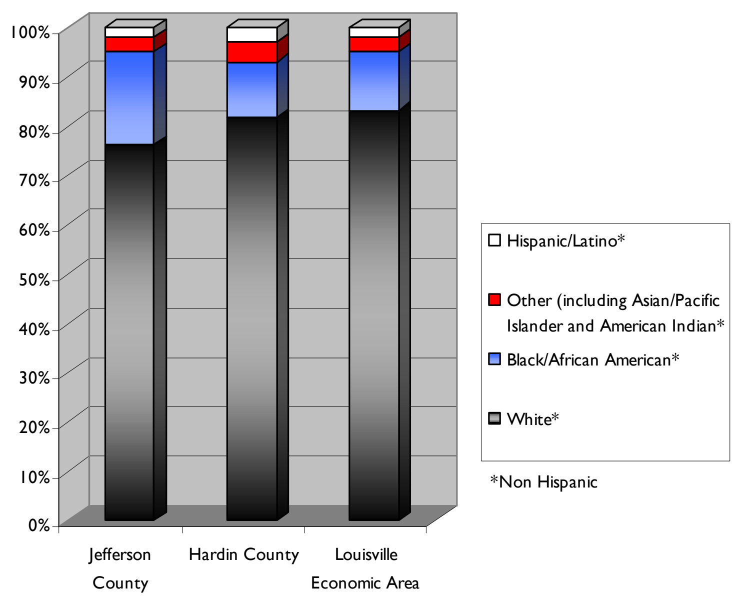
Implications: Single-parent families, those families most dependent on child care for work, are prevalent in Jefferson County and the surrounding area. Having accessible, affordable, and appropriate child care options for these parents is critical for their labor force participation and overall quality of life.

DIVERSITY

From 1990 to 2000, there was a shift in the racial/ethnic makeup of Jefferson and Hardin counties. The majority of each county's residents—81 percent of Jefferson's residents and 84 percent of Hardin's residents, were non-Hispanic whites in 1990, but by 2000, non-Hispanic whites accounted for 77 percent of Jefferson's residents and 81 percent of Hardin's residents.[16] In each county's case, the demographic shift came as a result of increasing numbers of African Americans/Blacks and Hispanics/Latinos. Projections reveal that Jefferson and Hardin counties will continue to become more and more diverse in the coming years.

Jefferson County is one of the most diverse counties in the Louisville Economic Area. Almost one-fifth of its population is African American/Black and over two percent is Hispanic/Latino. Hardin County has the second-highest proportion of African Americans/Blacks and Hispanics/Latinos in the area, accounting for 11 and 3 percent of the general population respectively. Hardin and Jefferson counties both have high proportions of Hispanics/Latinos (see Figure 4).[17] Furthermore, demographers from the Kentucky State Data Center project that there are two to three times more Hispanics/Latinos in the area than the Census Bureau estimates.[18]

Figure 4
Ethnicity/Race, Selected Areas, 2000



*Non Hispanic

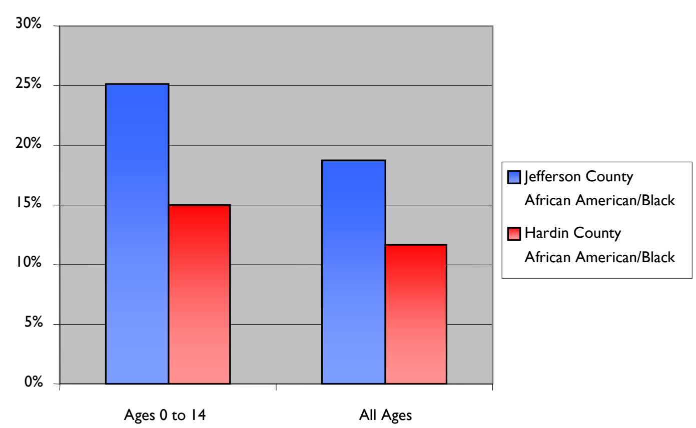
[16] U.S. Census Bureau. Census 1990 & Census 2000.
[17] U.S. Census Bureau. Census 2000.
[18] Ron Crouch, Demographer, Kentucky State Data Center. Interview, National Economic Development and Law Center (NEDLC), May 2003.

Implications: The shift in the racial/ethnic makeup of children in Jefferson and Hardin counties requires a varied array of culturally appropriate child care programs. Dual- or multi-lingual staff are necessary to communicate with children and their parents, and culturally sensitive curricula and care are necessary for meeting parents' desires for their children's upbringing.

While African Americans/Blacks comprise only 19 percent and 12 percent of the overall population in Jefferson and Hardin counties, they represent a much higher percentage of children in these counties. In fact, African American/Black children account for 25 percent of all children ages 0 to 14 in Jefferson County and 15 percent of Hardin's children ages 0 to 14 (see Figure 5).[19] This trend is similar with Hispanics/Latinos.

Figure 5

Percentage of children who are African American/Black, by age, Jefferson & Hardin Counties, 2000



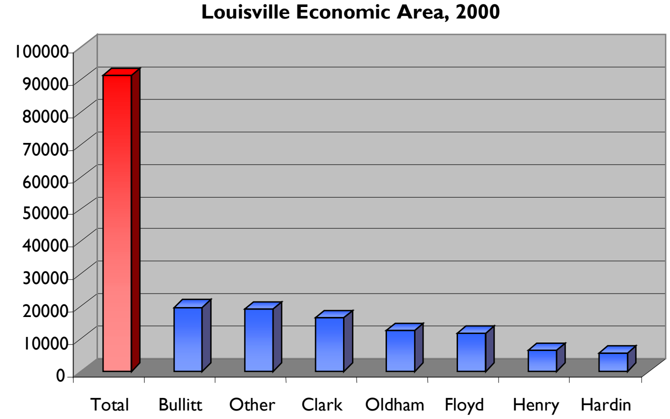
TRANSPORTATION

Child care and transportation are both critical elements of a strong economic infrastructure, as both enable people to work and access community services. Barriers to transportation or child care limit economic and educational opportunities for residents in Jefferson and Hardin counties.

Jefferson and Hardin counties are job magnets for workers in the Louisville Economic Area —significantly more workers commute to these counties than leave. From 1990 to 2000, the number of workers commuting to Jefferson County from surrounding counties increased 37 percent.[20] Because workers sometimes prefer early education programs in close proximity to their work, the commute patterns of the entire Louisville Economic Area have significant implications for the child care infrastructure of Jefferson and Hardin counties.

Figure 6

Workers Commuting to Jefferson County, Louisville Economic Area, 2000



[19] U.S. Census Bureau. Census, 2000. These percentages include those who consider themselves to of the Hispanic/Latino ethnicity and to be Black/African American.

[20] Chris Poynter. *The Courier Journal.* "Louisville Jobs Attract More Workers." March 6th, 2003.

Of the 405,000 laborers who work in Jefferson County, nearly one-fourth commute from outside the county (see Figure 6). Similarly, over 24 percent of workers who work in Hardin County commute from areas outside the county.[21]

> The U.S. Department of Transportation recognizes the links between child care, transportation, and economic development. Washington D.C., Cleveland, Chicago and other major cities have built child care centers at/near transit centers to assist working families. The Federal Transit Authority proposed a program to continue this process by building new child care centers in existing transit centers in U.S. cities.
>
> –The Child Care Bureau, *The Child Care Bulletin, Issue 19*, October 1998.

Jefferson County's workforce relies heavily on the automobile. Almost 81 percent of commuters over the age of 16 drive alone to work and 11 percent carpool. Only three percent of these commuters use public transportation, which is significantly lower than the national average of five percent.[22]

Jefferson and Hardin counties experience the following transportation trends:

- While only 8 percent of Jefferson County's 340,000 workers commute outside the county for work, it still has the second highest total number of workers leaving the county for work in the state.[23]
- Over 21,000 of Jefferson County's workers have one-way commutes that are longer than 45 minutes.[24]
- Almost 20 percent of Hardin County's workers commute outside the county—of which nearly 62 percent commute to Jefferson County.[25]
- Hardin County's average one-way commute time (23 minutes in 2000) increased 35 percent from 1990 to 2000.[26]

> Long commutes cost the Louisville MSA $335 million per year in productivity losses.

In the Louisville Metropolitan Statistical Area (MSA), rush hours increased from 3.8 hours in 1990 to 7.0 hours in 2000. The loss in productivity stemming from this congestion was estimated to be $335 million per year in 2000 (a 509 percent increase from 1990), making it one of the highest total losses of any medium-sized metropolitan area.[27]

> *Implications:* Long commutes create a demand for child care programs that operate during nontraditional hours. Because such large percentages of Jefferson and Hardin counties' workforces are made up of workers in surrounding counties, there is a demand for child care services within each county to accommodate the child care needs of many of these workers. Also, strategic transportation planning that incorporates child care is needed to ensure that working parents have access to economic opportunities in the area.

[21] University of Louisville, Kentucky State Data Center. *2000 Census County-to-County Commute Patterns, March 2003.*
[22] U.S. Census Bureau. Census 2000.
[23] Ibid.
[24] Ibid.
[25] Ibid.
[26] Ibid.

LABOR FORCE

Between 1990 and 2000, the Louisville Economic Area added an astounding 160,000 net jobs, growing 22 percent. By contrast, the population of people over the age of 16 in the area only increased by 11 percent. Without increased female labor force participation coupled with other economic conditions, the area's labor force would not have been able to cover the gap between new jobs and new labor force participants.[28]

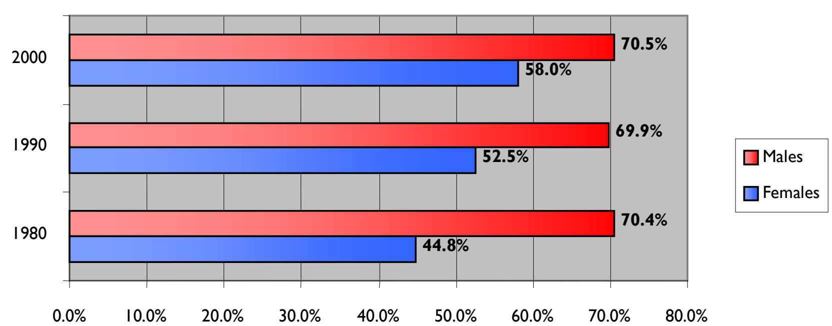
Projections reveal that the population of persons ages 16 to 64 in the Louisville Economic Area is expected to grow only nine percent from 2000 to 2010.[29] On the other hand, the total number of jobs are expected to increase 16 percent over the same time period.[30]

__Implication__: In order to fill the gap between job growth and population growth, increased labor force participation, especially among females, will be necessary. An affordable, available, and quality child care infrastructure is needed to ensure the area experiences an increase in economic prosperity.

In comparison to other metro areas of similar size, the Louisville Economic Area's labor force participation (65 percent) and unemployment rates (3 percent) are relatively low.[31]

Since 1980, females have accounted for a higher percentage of employed persons in the Louisville Economic Area (see Figure 7). While employment rates for males remain unchanged, female employment rates increased from 45 percent in 1990 to 58 percent in 2000.[32]

Figure 7
Employment rates of females and males ages 16 and over, Louisville Economic Area, 1980 to 2000



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[27] The Brookings Institute, Center for Urban and Metropolitan Policy. *Beyond Merger: A Competitive Vision for the Regional City of Louisville, 2002.*
[28] Louisville/Jefferson County Workforce Investment Board. *The Louisville Labor Force: Trends and Issues, 2000.* The reduction of underemployment and unemployment, and the increase in part-time work also helped cover the gap between new jobs and labor force participants.
[29] University of Louisville, Kentucky State Data Center. *Kentucky and Counties Population Projection 2005-2030, June 2003.* Indiana Business Research Center, Stats Indiana. *Population of Indiana Counties, 2000 to 2020, 1998.*
[30] Kentuckiana Works. *Kentuckiana Occupational Outlook, 2000-2010.*
[31] The Brookings Institution Center on Urban and Metropolitan Policy. *Beyond Merger: A Competitive Vision for the Regional City of Louisville, 2002.*
[32] U.S. Census Bureau. Census 2000.

In *Louisville Labor Force Trends and Issues,* the Workforce Investment Board of Louisville and Jefferson County recognized the shifting nature of the economic area's workforce, acknowledged the importance of female labor force participation for economic growth, and stressed the need for businesses to address the needs of this growing population of workers.[33]

Implication: "The area workforce has become much more balanced by gender and future economic growth will have an increasingly feminine character. This trend has important consequences. Companies and communities that are flexible and creative in managing this change will find more prosperity than those stuck with old models."
The Jefferson County/Louisville Workforce Investment Board

In the Louisville Economic Area over 20 percent of the adults over 25 do not have a high school diploma, and only 20 percent of adults over age 25 have a bachelor's degree.[34] The Progressive Policy Institute, using a weighted index of educational skills, ranked Louisville's workforce 37th out of the 50 largest metropolitan areas in the country. Furthermore, the region ranked 42nd in degrees granted in scientific and technical fields.[35]

Implication: The area's shortage of highly skilled workers makes it critical for the region to attract and retain skilled families.

In 2000, the Workforce Investment Board of Louisville and Jefferson County hired Horizon Research International to conduct a survey of employers to assess the region's demand for workers. Only 19 percent of companies interviewed were satisfied with the skill level and talent of the available workforce.[36] The Brookings Institution also highlighted the weakness of the region's human capital and how that might impair the region's competitiveness in attracting businesses that have the greatest potential for raising the incomes of the region's residents.[37]

Implication: In a survey of businesses in the Greater Louisville area, only 19 percent indicated that they were satisfied with the skill level of the local workforce.
As Louisville focuses on improving the skills of its workforce, it should include child care as part of the educational system by investing in quality improvement initiatives for existing early care and education programs that prepare the future workforce for jobs in high-skilled technology and professional service occupations.

In 2000, there were approximately 678,000 jobs in the Louisville Economic Area. The service industry (which currently includes the "child day care services" industry classification) employs significantly more workers than any other industry, accounting for 39 percent of all jobs in the area (see Figure 8).[38] Computer services which include: software engineers, systems administrators, data communications analysts, and computer specialists, make up seven of the

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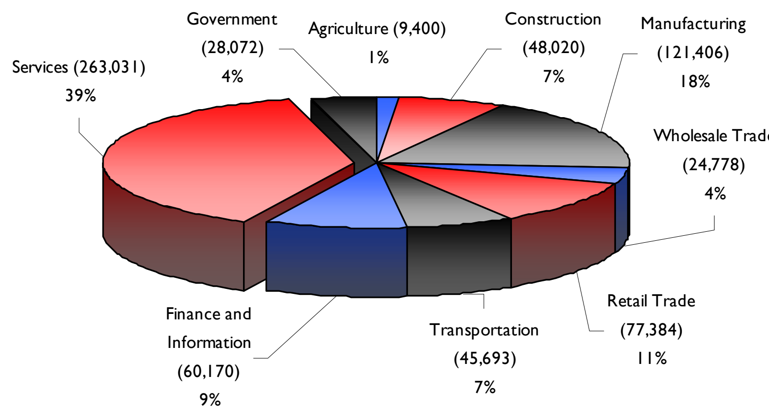
[33] Jefferson County/Louisville Workforce Investment Board. *The Louisville Labor Force: Trends and Issues, 2000.*
[34] Ibid.
[35] The Brookings Institution Center on Urban and Metropolitan Policy. *Beyond Merger: A Competitive Vision for the Regional City of Louisville, 2002.*
[36] The Workforce Investment Board of Louisville & Jefferson County. *Research to Evaluate Selected Workforce Demand Issues in Jefferson County, Kentucky, March 2000.*
[37] The Brookings Institution Center on Urban and Metropolitan Policy. *Beyond Merger: A Competitive Vision for the Regional City of Louisville, 2002.*
[38] U.S. Census Bureau. Census 2000.

ten fastest-growing occupations in Jefferson County.[39] This trend reiterates how critical attracting and retaining working families with skills will be for the sustained economic growth of the county and the region.

Other major industries in the Louisville Economic Area include manufacturing and retail trade. Combined, these industries employed almost 199,000 workers in 2000—18 percent and 11 percent of all jobs respectively (see Figure 8). Transportation is also a key industry in a region whose labor market and economic area are expanding rapidly.

Figure 8

Employment by Industry, Louisville Economic Area, 2000



United Parcel Service (UPS) is the single-largest employer in Jefferson County and the state of Kentucky, employing over 21,000 workers throughout the area.[40] Other large companies in the service sector include Humana, Norton Healthcare, and Jewish Hospital Services.[41] Major manufactures include GE Appliances and UAW-Ford.[42] The new Louisville Metro Government employs 6,500 people[43] and the Jefferson County Public Schools System employs 13,500 people,[44] making them the two largest public sector employers in the county. Small businesses are also vital to the economic prosperity of the region. Cognetics, a Massachusetts research firm that focuses on the fastest growing small companies, recognizes Louisville as one of the top ten metro areas where small business is thriving.[45]

Fort Knox, located between Louisville and Elizabethtown, is a crucial economic driver for the region, employing 14,000 people and accounting for over $500 million dollars in annual payments to soldiers, civilian workers, and retirees,[46] and having a total economic impact of an estimated $1.1 billion.[47] Other large employers in Hardin County include: Hardin County School System (2,178 employees), Hardin Memorial Hospital (1,500 employees), Dana Corporation

[39] Kentuckiana Works. *Fastest Growing Occupations in Jefferson County, KY, 2000-2010.*
[40] Business First. *Major Private Sector Employers, August 10, 2001.*
[41] Ibid.
[42] Ibid.
[43] Louisville Metro Government, Human Resources Department, 2003.
[44] Jefferson County Public Schools, Public Relations Department, 2003.
[45] Cognetics. *Entrepreneurial Hot Spots, Top Ten Large Metro Areas for Small Business, 2001.* Louisville was ranked ninth.
[46] The Kentucky Economic Development Partnership. *The Recent Economic Performance of Regions in Kentucky, 2001.*
[47] Information compiled by the Directorate of Resource Management, United States Army Armor Center and Fort Knox, Fort Knox, Kentucky 42701

(1,170 employees), Ambrake Corporation (1,105 employees), and A P Technoglass (572 employees).[48]

Implication: With the area's largest growth industries being in service and retail, there is a greater demand for child care during hours outside of the traditional 8am – 6pm child care schedule. In addition, because of the low to medium wages in the service and retail industries, many employees cannot afford child care.

COST OF LIVING

The cost of living for working families has grown exponentially since the 1950's. The goods that make up the lion share of a family budget (housing, education, healthcare and child care) are mostly labor-intensive goods and thus resistant to productivity increases stemming technology advances. For this reason, the purchasing power of the average American family has dropped despite productivity gains that have lowered the costs for other consumer goods like food and electronics.[49]

Implication: Because many existing jobs, including jobs that expect the greatest growth, do not pay a self-sufficiency wage, families struggle to cover necessary household expenditures, including child care.

The Self-Sufficiency Standard measures the amount of income needed for a family to adequately meet its needs without government assistance. The Louisville MSA's self-sufficiency wage is $39,844 for an adult with two small children,[50] which is significantly higher than the average yearly wage for all jobs in Jefferson County ($32,400).[51] Over 54 percent of all jobs in the Louisville MSA pay less than Louisville's self-sufficiency wage for a single adult with a preschooler ($14.22 /hour).[52]

Of the top 25 jobs with the greatest absolute projected growth from 2000 to 2010 in Jefferson and Hardin counties, an estimated 28 percent did not pay an annual self-sufficiency wage ($30,017 per year for a single-parent family with one preschooler in Jefferson County and $22,851 for a single-parent family with one preschooler in Hardin County) in 2000.[53]

In July of 2002, the median cost of a home was $124,000 in the Louisville MSA. While this price is lower than the national median price ($160,000), more than 22 percent of all householders in the area could not afford a house at median price.[54] Hardin County's median home price of $86,000 is significantly lower than Jefferson County's, which is why many residents choose to live in Hardin County and commute to Jefferson County for work.[55]

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[48] Hardin County. *Largest Employers in Elizabethtown Area, April 2003.*
[49] Jeff Madrick. *Why Economies Grow: The Forces That Shape Prosperity & How to Get Them Working Again.* New York: The Century Foundation, 2002.
[50] Wider Opportunities for Women. *The Self Sufficiency Standard for Kentucky: Real Budgets, Real Families, November 2001.* The self-sufficiency standard is the minimum wage needed to cover basic costs of housing, food, transportation, health care, and child care in the local area.
[51] Think Kentucky. *Community Profiles: Average Weekly Wages, Jefferson County 2001.* Annual wages were calculated by multiplying weekly averages by 52.
[52] Think Kentucky. *Community Profiles: Average Weekly Wages, Jefferson County 2001.* Annual wages were calculated by multiplying weekly averages by 52.
[53] Kentuckiana Works. *Kentuckiana Occupational Outlook, 2000-2010.*
[54] National Association of Home Builders. *Housing Opportunity Index: First Quarter 2002.*
[55] Think Kentucky. *Community Profiles: Average Weekly Wages, Jefferson County 2001.* Annual wages were calculated by multiplying weekly averages by 52.

Implication: In order to attract and retain skilled families, Jefferson and Hardin counties must keep housing and other household expenses like child care affordable.

CHILD CARE COSTS

Full-time licensed child care costs for one infant and one toddler accounted for 23 percent of Jefferson County's median family income in 2000.

The average yearly cost of child care for an infant in full time center-based care in Jefferson County is currently estimated at $6,144 per year.[56] This cost is significantly higher than a year's tuition for a Kentucky resident at the University of Louisville ($4,450)[57] and the University of Kentucky ($3,975).[58] Full-time center-based child care for an infant and a toddler in Jefferson County has an average yearly cost of over $11,388.[59] For a family at median family income ($49,161), these child care costs make up over 23 percent of their total annual income.[60]

In Hardin County, child care is less expensive: Full-time center-based child care for an infant costs $4,524 per year.[61] However, full-time child care for an infant and a preschooler costs $8,362,[62] which is still 19 percent of family's total budget, if they earn a median income ($43,610).[63]

LOW-INCOME FAMILIES

The per capita income of the Louisville MSA trails 14 similar metro areas including: Raleigh, Richmond, Charlotte, Indianapolis, and Nashville.

Many families in the Greater Louisville Area struggle to be self-sufficient:

- The Louisville MSA's per capita income of $22,000 is relatively low compared to 14 similar metro areas.[64]
- Hardin County's per capita income of $17,000 is much lower than Louisville's.
- More than ten percent of all families in Jefferson and Hardin counties' earn an annual income of less than $15,000.[65]
- Over 84,000 residents lived under the federal poverty line in Jefferson County—12 percent of the total population in 1999.[66]

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[56] Cost information gathered from a survey of child care centers conducted by the Kentucky Association of Child Care Resource & Referral Agencies, 2003.
[57] University of Louisville. Student Information-Tuition. The yearly tuition for an undergraduate, Kentucky resident student attending the University of Louisville during the fall of 2003 and the spring of 2004 was used.
[58] University of Louisville, Office of the Registrar. Undergraduate Student Information, Tuition. The yearly tuition for an undergraduate, Kentucky resident attending the University of Louisville during the fall of 2002 and the spring of 2003 was used.
[59] Cost information gathered from a survey of child care centers conducted by the Kentucky Association of Child Care Resource & Referral Agencies, 2003.
[60] U.S. Census Bureau. Census 2000.
[61] Cost information gathered from a survey of child care centers conducted by the Kentucky Association of Child Care Resource & Referral Agencies, 2003.
[62] Cost information gathered from a survey of child care centers conducted by the Kentucky Association of Child Care Resource & Referral Agencies, 2003
[63] U.S. Census Bureau. Census 2000.
[64] Ibid.
[65] U.S. Census Bureau, Table DP-3. Profile of Selected Economic Characteristic: 2000.
[66] Ibid.

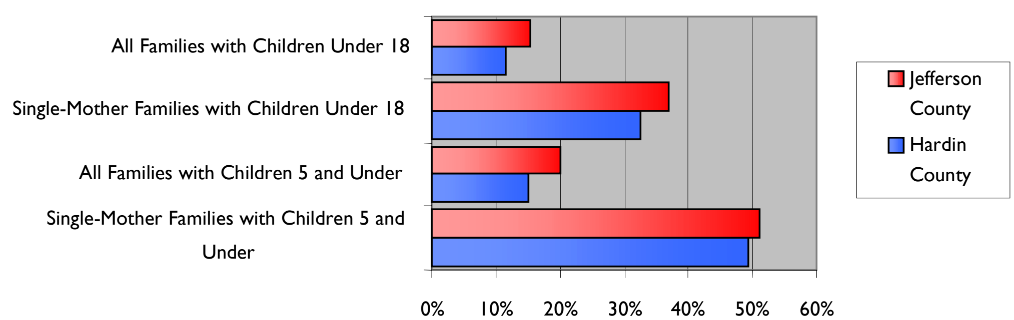
- There are even greater numbers of working poor families in the area. The working poor are workers whose wages may be above the poverty line, but are too low to afford a decent standard of living.[67]
- Almost 16 percent of all taxpayers in the Louisville MSA earned wages in 1999 that were low enough for them to qualify for the Federal Earned Income Tax Credit (EITC).[68]

Implications: Affordable child care is needed to assist low-income and "working poor" families in the area. Investments in child care quality improvement programs are also necessary to ensure a strong future workforce that attracts new industries that pay higher wages.

- The percentage of families living under the federal poverty line increases for families with younger children in Jefferson County (see Figure 9).
- While 15 percent of families with children 18 and under are living in poverty in Jefferson County, over 20 percent of families with children five and under live in poverty. This same trend occurs in Hardin County (see Figure 9).[69]
- The percentage of families living in poverty increases dramatically for single-mother families (see Figure 9). In Jefferson County 15 percent of families with children 18 and under live below the poverty line and over 37 percent of single-mother families with children 18 and under live in poverty.
- 20 percent of all families with children ages five and under live below the poverty line, but 51 percent of single-mother families with children five and under live in poverty (see Figure 9).[70]
- Single-mother families are much more likely to live below the poverty line in Hardin County (see Figure 9).[71]

Figure 9

Percentage of Families in Poverty, Jefferson and Hardin Counties, 1999



[67] Brookings Institution, Center for Urban and Metropolitan Policy. *Beyond Merger: A Competitive Vision for the Regional City of Louisville, 2002.*
[68] Ibid.
[69] U.S. Census Bureau. Census 2000.
[70] Ibid.
[71] Ibid.

- In 2001, 64 percent of Jefferson County school-age children were classified as low-income children, eligible for free or reduced-price meals. Low-income children live in households with a total income at or below 185 percent of the poverty level (approximately $17,650 for a family of four in 2001).[72]
- In the 2000 to 2001 school year, almost 50 percent of all children were eligible for free or reduced meals in Hardin County's elementary and middle schools.[73]
- From May 2003 to July 2003 there were 774 families and 1,453 children on waiting lists for the Child Care Assistance Program (CCAP) in Jefferson County. In Hardin County there were 228 families and 418 children on waiting lists for the same funds.[74]

Implication: Because of the high number of low-income children in Jefferson and Hardin counties and the Louisville Economic Area, child care programs experience an aggressive demand for limited subsidized slots. Single-parent families with young children, those most in need of child care, are most likely to be in poverty. Affordable child care is needed to ensure that these families continue to work.

In 2002, the Brookings Institution prepared a report that highlighted five strategies that would make Louisville a more economically competitive city. One strategy focused on the importance of investing in working families for the economic development of the region.[75]

"Strong families are … a precondition for competitive cities. The new city should therefore strive to lift all working families out of poverty and onto the path of self-sufficiency."

The Brookings Institute: Beyond Merger: A Competitive Vision for the Regional City of Louisville

SECTION SUMMARY

Jefferson and Hardin counties need to expand the amount of assistance available to low-income families to increase the supply of affordable child care. Affordable and accessible child care options enables more families and single parents to go to work and attend school. Also, the added workforce aids in the production of the community's needed goods and services. Increased investment in child care quality improvement programs supports a strong current and future workforce. A quality educational system that includes both early learning programs and the traditional school system will help the region attract and retain skilled, young, working families who will in turn, attract and retain businesses that pay higher wages.

[72] Kentucky Department of Education. Max Data System: *Socio-Economic Status (SES) of Children, 2000-2001.* In several schools in Jefferson County, every student was considered eligible for a free or reduced-price meals.
[73] Kentucky Department of Education. Max Data System: *Socio-Economic Status (SES) of Children, 2000-2001.*
[74] Kentucky State Department of Children & Families, Division of Childcare. *CCAP Waiting List: Family/Children Running Count, July 2003-June 2004.*
[75] The Brooking Institution, Center on Urban and Metropolitan Policy. *Beyond Merger: A Competitive Vision for the Regional City of Louisville, 2002.*

ECONOMIC PROFILE OF THE CHILD CARE INDUSTRY

To assess the economic characteristics of the child care industry in Jefferson and Hardin counties, this section quantifies:

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

DIRECT EMPLOYMENT

The licensed child industry directly supports 3,840 jobs in Jefferson County.

Direct employment for licensed child care in Jefferson County is estimated to be 3,840 full-time equivalent jobs (FTEs), and the Hardin County licensed child care industry supports 438 FTEs. These figures are derived from the actual child care inventory and the number of children in different types of care, assuming compliance with minimum staffing requirements imposed by licensing laws for different age groups, and minimal support staffing in centers serving more than 80 children at any one time (see Appendix A for a detailed methodology).

Hardin County's licensed child care industry supports 438 jobs.

An economic analysis of the indirect and induced effects of the child care industry on Jefferson and Hardin's economies is included in Appendix B. Many informed observers indicate that these effects are not part of a conservative approach at conducting economic impact reports and thus these analyses are not included in the main body of this report.[76]

DIRECT EMPLOYMENT COMPARED WITH OTHER INDUSTRIES—JEFFERSON COUNTY

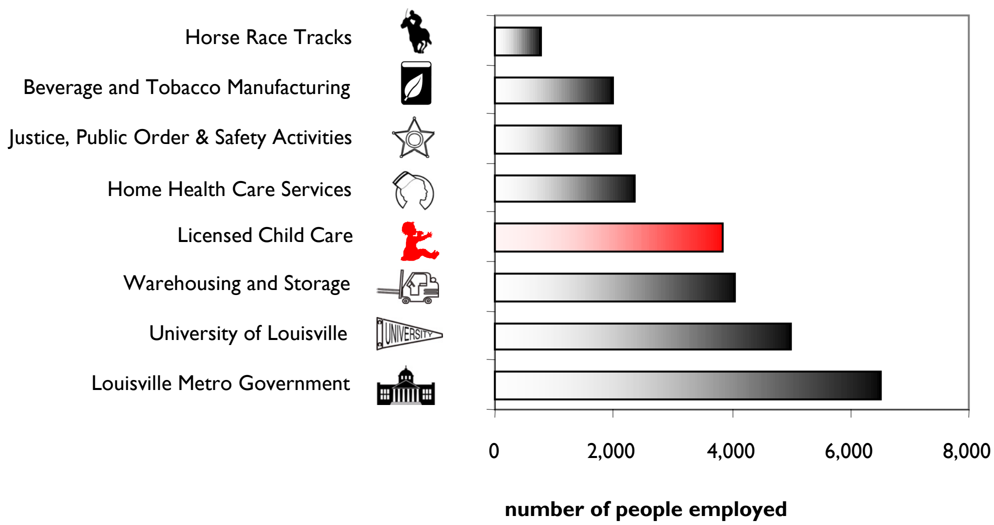
There are more FTEs in licensed child care in Jefferson County than there are in beverage and tobacco manufacturing.

To put employment findings in context, the number of FTEs in child care is compared to employment in other industries. The licensed child care industry in Jefferson County supports nearly as many FTEs as the Louisville Metro Government (6,500 jobs), the University of Louisville (5,000 jobs), and the warehousing and storage industry (4,039 jobs; see Figure 1).[77] There are more FTEs in child care in Jefferson County than there are in: home health care services; justice, public order and safety activities; beverage and tobacco manufacturing; and horse race tracks (see Figure 1).[78]

[76] Personal communication, Art Rolnick, Director of Research, Federal Reserve Bank of Minneapolis, 2003.
[77] All employment information for industries is from the ES-202 Covered Employees and Wages 2001 Survey, adjusted to 2003, except for the licensed child care industry. Child care direct employment is calculated using methodology described in Appendix A.
[78] Ibid.

Figure 1

Direct Employment Industry Comparisons, Jefferson County, 2003



All employment information for industries is from the ES-202 Covered Employees and Wages 2001 Survey, adjusted to 2003, except child care, the University of Louisville, and the Louisville Metro Government. Child care employment information was taken from findings in this report, and employment information for the University of Louisville and Louisville Metro Government was taken from their respective personnel departments.

DIRECT EMPLOYMENT COMPARED WITH OTHER INDUSTRIES— HARDIN COUNTY

> There are more child care professionals in Hardin County than there are faculty and staff working in public elementary schools.

The number of FTEs in child care is similar to the number of employees in the Hardin County local government (890 jobs) and the plastics and rubber manufacturing industry (721; see Figure 2).[79] There are more FTEs in Hardin County's licensed child care industry than there are in machinery manufacturing, public elementary schools, telecommunications, and clothing stores (see Figure 2).[80]

[79] All employment information for industries is from the ES-202 Covered Employees and Wages 2001 Survey, adjusted to 2003, except for the licensed child care industry, and public elementary school teachers and staff. Child care direct employment is calculated using methodology described in Appendix A. Employment information for public elementary school teachers and staff were obtained through the Hardin County School System Human Resources Department.

[80] Ibid.

Figure 2
Direct Employment Industry Comparisons,
Hardin County, 2003

All employment information for industries is from the ES-202 Covered Employees and Wages 2001 Survey, adjusted to 2003, except child care (taken from findings in this report), and public elementary school teachers and staff (taken from Hardin County's Public School System's Human Resources Department).

MEASURING CHILD CARE INDUSTRY OUTPUT OR GROSS RECEIPTS

Output, also known as gross receipts, measures the size of an industry in terms of the overall value of the goods and services produced by that industry over the course of a given year. For child care services, gross receipts are equal to the total amount of dollars flowing into the sector in the form of payments for care, including both parent fees and private and public subsidies.

Economists typically analyze industries and their impacts based on state and national surveys of businesses. Many surveys use an industrial classification system that recognizes "child day care services," but underestimate the size of the child care industry because of its diversity of establishments (i.e. self-employed individuals, programs run by religious or social organizations, and both not-for-profit and for-profit small businesses and chains).[81]

This study uses a more accurate method of measuring the size of the child care industry, as it primarily relies upon data from the Community Coordinated Child Care (4-C), the child care resource and referral service provider (R&R) for Jefferson and Hardin counties. This agency is charged by the state to collect comprehensive countywide data on the availability and use of most licensed child care programs.

[81] The North American Industry Classification System (NAICS) is the most used classification system, separating industries into 20 major sectors, and 1,196 industry subsectors. "Child Day Care Services" is NAICS code 624410.

Gross receipts for family child care homes and child care centers[82] were calculated by multiplying the number of children enrolled in each type of care by the average cost of care. To ensure that gross receipts were accurately captured, cost and enrollment information were broken down by county (Jefferson or Hardin), type of care (family child care homes and child care centers), age of child (infant, toddler, pre-school age, and school age) and length of care (full-time and part-time). Average daily rates from the 2002 Kentucky Child Care Market Rate Survey were used to derive average annual rates for each type of care.

There are approximately 663 licensed child care facilities in Jefferson County that collectively care for approximately 28,157 children[83]:

- 241 small family child care homes—Certified
- 17 large family child care homes—Type II
- 405 child care centers—Type I

Likewise, Hardin County has approximately 117 licensed facilities that collectively care for approximately 3,859 children[84]:

- 51 small family child care homes—Certified
- 5 large family child care homes—Type II
- 61 child care centers—Type 1

Based on the methodology briefly described above, the estimated value of annual gross receipts for licensed child care in Jefferson County is $119.8 million ($7.1 million for family child care homes, $112.6 million for center-based care).

> The estimated annual gross receipts for licensed child care total $119.8 million in Jefferson County.

The estimated value for gross receipts for the licensed child care industry in Hardin County is $14.9 million ($1.1 million for family child care homes and $13.8 million for child care centers).

> The licensed child care industry in Hardin County generates approximately $14.9 million in gross receipts.

Comparing estimates contained in this report with data from the most recent Bureau of Labor Statistics' ES-202 Covered Employees and Wages 2001 Survey shows how much the total impact of the licensed child care industry is underestimated. Adjusting dollar values to 2003 for comparison, the survey estimates that gross receipts for child care in Jefferson County are $96.4 million, only 80 percent of those derived from comprehensive local data.[85] Likewise, in Hardin County, labor survey estimates are only 90 percent of estimates derived from local data.

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[82] As referenced in Section 1, gross receipts and employment information for Head Start and State Pre-school programs are not included in this report.
[83] Current survey results from Community Coordinated Child Care (4-C), Louisville.
[84] Ibid.
[85] Gross receipts estimates for Jefferson and Hardin counties were derived from the Bureau of Labor Statistics ES-202 Covered Employees and Wages 2001 Survey. Employment estimates were run through IMPLAN to estimate total gross receipts. The ES-202 Covered Employees and Wages 2001 Survey is mailed to a list based on U.S. businesses with employer identification numbers (EIN), and excludes private households and governments.

GROSS RECEIPTS COMPARED WITH OTHER INDUSTRIES— JEFFERSON COUNTY

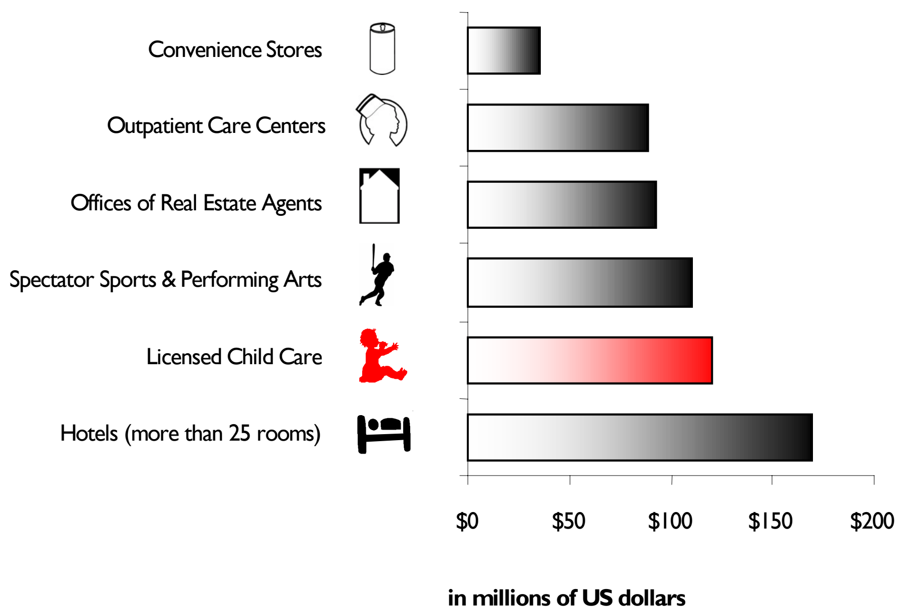
Jefferson County's licensed child care industry generates nearly as many gross receipts as hotels.

Comparing the licensed child care industry with other Jefferson County industry subsectors indicates that licensed child care is larger than the following industries: offices of real estate agents ($93.0 million), and outpatient care centers ($89.0 million; see Figure 3). Child care generates considerably more gross receipts than convenience stores in the county ($35.7 million; see Figure 3). In addition, the child care industry is similar in size to the industry that includes spectator sports and performing arts ($110.1 million; see Figure 3). The child care industry also generates nearly as many gross receipts as hotels in the county (see Figure 3).[86]

Figure 3

Gross Receipts Comparisons Between

Jefferson County's Industries, 2003



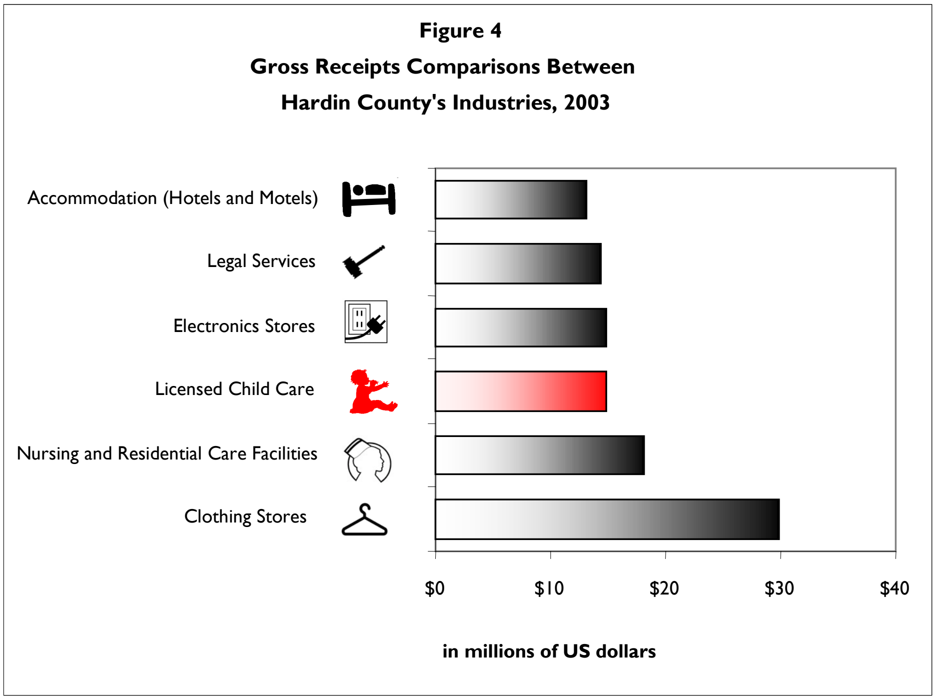
Gross receipts for all industries except child care are from the 1997 Economic Census. All values have been adjusted to 2003. Child care gross receipts are calculated using methodology described in Appendix A. Gross receipts for spectator sports do not include collegiate athletics or horse racing, and performing arts gross receipts do not include entertainment that occurs at eating and drinking establishments. Convenience stores do not include stores that are attached to gas stations, unless they are separate establishments.

[86] U.S. Census Bureau. Economic Census (1997). All gross receipts values are updated to 2003 levels. Gross receipts for spectator sports do not include collegiate athletics or horse racing, and performing arts gross receipts do not include entertainment that occurs in eating and drinking establishments. Convenience stores do not include stores that are attached to gas stations, unless they are separate establishments.

GROSS RECEIPTS COMPARED WITH OTHER INDUSTRIES— HARDIN COUNTY

Hardin County's licensed child care industry generates nearly as many gross receipts as nursing care and residential care facilities.

Comparing the licensed child care industry with Hardin County's other industry subsectors indicates that licensed child care is larger than the following industries: electronics stores ($14.9 million); legal services ($14.4 million), and accommodation (hotels and motels; $13.1 million; see Figure 4).[87] Hardin County's licensed child care industry generates nearly as many gross receipts as nursing and residential care facilities and clothing stores.



Gross receipts for all industries except child care are from the 1997 Economic Census. All values have been adjusted to 2003. Child care gross receipts are calculated using methodology described in Appendix A.

PUBLIC INVESTMENTS IN CHILD CARE

Public investments in child care benefit Jefferson and Hardin counties in several ways. Since payments are tied to job training and work activities, they are an important part of workforce development and enable many people (who would otherwise have to look after their own children or leave them in an unsafe setting, such as self-care) to join the labor force. They also bring new dollars to the local economy, which then circulate through various sectors and stimulate other economic activity.

[87]Gross receipts for all industries are from the 1997 Economic Census, except the licensed child care industry. Child care gross receipts are calculated using methodology described in Appendix A. All values have been adjusted to 2003.

Federal and state governments and the private sector provide child care assistance primarily to help poor families participate in the workforce, training, or educational activities. The majority of funds are paid using a "Parental Choice" form. This "Parental Choice" form enables families to choose their own licensed or license-exempt child care provider. The payments are then sent by the state directly to the provider of the parent's choice. Other funds provide direct payments to providers and other organizations for child care quality improvement initiatives.

Public child care assistance payments are allocated through the Division of Child Care in the Kentucky Cabinet for Families and Children. Three types of payments are allocated though the Child Care Assistance Program (CCAP):

- K-TAP child care assistance is funded through the federal Temporary Assistance for Needy Families (T.A.N.F) grants. The funds provide payments to child care providers of the parent's choice.
- Child Care Development Fund (CCDF) finances federal and state child care benefits for low-income families who are either working or participating in work activities. These funds also offer payments to the child care provider of the parent's choice.
- Tobacco Settlement Monies (TABO) support low-income child care benefits and child care quality improvement initiatives.

In 2002, Jefferson County captured roughly $44.7 million in child care-related funding, and Hardin County captured roughly $4.2 million (see Table 1 for breakdown). Some of these funds were distributed to licensed child care facilities; however, a significant portion of child care subsidies were redeemed by license-exempt child care providers. Public investments in child care are significantly larger in proportion to gross receipts in Hardin County than they are in Jefferson County.

Table 1
Public/Private Child Care Investment,
Jefferson & Hardin Counties, Fiscal Year 2002

	Hardin County	Jefferson County
Parental Choice Child Care Assistance Payments		
K-TAP/T.A.N.F Child Care Funds [88]	$321,000	$11.1 million
Child Care Development Fund Payments[89]	$3.8 million	$32.5 million
Kentucky Tobacco Settlement Monies (TABO) [90]	$64,000	$586,000
Other Child Care Investments		
Metro United Way Child Care Assistance[91]	N/A	$323,000
Louisville/Jefferson County Metro Government Child Care Vouchers for Metro Government Employees[92]	N/A	$103,000
Louisville/Jefferson County Metro Government Funds that expand child care assistance for Louisville residents[93]	N/A	$118,000
Annual Total:	**$4.2 million**	**$44.7 million**

[88] Kentucky Department of Children and Families, Child Care Division. *Child Care Assistance Program (CCAP), Subsidies Data for Fiscal Year 2002.*
[89] Ibid.
[90] Ibid.
[91] Metro United Way. Child Care Subsidies, Jefferson County, 2002.
[92] Louisville/Jefferson County Metro Government. Child Care Financial Assistance for Louisville Metro Government Employees, 2002.
[93] Louisville/Jefferson County Metro Government. Funds to expand the availability of child care financial assistance to Louisville Metro residents, 2002.

Counties across Kentucky experience aggressive demand for subsidized child care. From May to July 2003, there were 954 families and 1,422 children on waitlists for subsidized child care in Jefferson County, and 228 families and 418 children on waitlists for subsidized child care in Hardin County.[94] In relation to its size, Hardin County experiences a greater shortage of subsidized child care slots than Jefferson County.

Because lower-wage occupations lead much of the Louisville Economic Area's projected job growth, the availability of federal and state child care payments play an increasingly important role in supporting local economic development. Targeted local investments in child care helps the county garner a larger share of child care funds and, in turn, maximize the local economic effects of those federal and state funds.

SECTION SUMMARY

The diversity of the child care system is a vital feature in its ability to meet the needs of Jefferson and Hardin counties' families, but makes it difficult to analyze and measure. However, using data maintained by organizations charged by the State of Kentucky with tracking the supply, cost and licensure of child care facilities, an estimate of its composite size can be derived. This overall size, measured in terms of employment and gross receipts is comparable to many other more easily recognizable industries in each county.

The substantial size of the child care industry means that it not only supports the economy by allowing parents to work, but also contributes to its vitality by employing significant numbers of workers. The child care field also supports the economy by capturing significant levels of federal funds available to support poor families. These families represent a substantial portion of the existing and potential workforce, and are vital to the continued growth of the economy.

[94] Kentucky Department of Children and Families, Child Care Division. *CCAP Waiting List Families/Children, Running Count, July 2003 through July 2004.*

CHILD CARE AND BUSINESS

Economic development policies that support child care programs are necessary and viable options that not only increase the availability, sustainability and quality of child care, but also promote the vitality of local, regional, and state economies. Economic development refers primarily to public and private activities designed to attract, expand, retain, or start up businesses in state and local economies—often by providing land, tax abatements, regulatory relief, low-cost capital financing, facilities and workforce development resources, business assistance programs, and other concessions. These activities help stabilize and enhance the affordability and quality of the child care industry by addressing its unmet facilities and business development needs, and ensure that the child care infrastructure is in place to meet the economic development needs of Jefferson and Hardin counties.

Economic infrastructures like good transportation, affordable housing, and accessible, affordable, quality child care are critical for ensuring Jefferson and Hardin counties' economic competitiveness and attracting businesses from industries that pay higher wages to the area. In the *2002 Visioning Report Update*, an ongoing planning paper for the development of the greater Louisville area, M. Ross Boyle of Growth Strategies Organization reported that "while Louisville had many assets …the community had few attributes to truly distinguish it from many other mid-size U.S. cities."[95] The report detailed the importance of developing the workforce by reversing the brain drain, improving employment services to minorities, and establishing a Workforce Investment Board.

> "A key strategy for the growth of the Louisville community is the attraction and retention of talent, and a critical component to the success of that strategy is providing a high quality of life in our community. Access to quality, affordable child care is one very important aspect of Greater Louisville's quality of life."
>
> *Steve Higdon, President/CEO of Greater Louisville Incorporated*

In *Beyond Merger: A Competitive Vision for the Regional City of Louisville,* the Brookings Institution also recognizes the importance of overcoming "serious human capital and quality of life challenges that threaten [Louisville's] future competitiveness." One of its major recommendations for making Louisville more competitive is to "invest in working families."[96]

Strengthening the child care infrastructure is a critical part of ensuring the success of these strategies. Investing in quality child care is a win-win situation:

- ***Businesses win*** when quality, affordable, accessible child care options attract new skilled workers to the area, and improve attendance and job satisfaction in existing employees
- ***Financial Institutions win*** when the child care industry becomes a more viable market for their loan products
- ***Communities win*** when parents have access to safe, quality child care for their children while they work
- ***Children win*** because they enter the traditional K-12 school system healthy, socialized and ready to learn

[95] Statement by M. Ross Boyle, President of Growth Strategies Organization in the 2002 Visioning Report Update, by Greater Louisville, Inc. (2003).
[96] The Brookings Institution. *Beyond Merger: A Competitive Vision for the Regional City of Louisville, 2002.*

- ***Government wins*** when taxpayers pay less in criminal justice, remedial education, and welfare costs

Public and private investments in quality care and education contribute to Jefferson and Hardin's economic development by:

- Maintaining high labor force participation rates in Jefferson and Hardin counties
- Increasing economic productivity by decreasing absenteeism, reducing turnover, and enhancing recruitment at existing businesses
- Enabling workforce development of parents in school or job skills training
- Cultivating the region's future workforce by improving the cognitive skills and emotional well-being of children and ensuring that they enter the traditional K-12 school system ready to learn
- Reducing future public spending in such areas as criminal justice, remedial education, and welfare

MAINTAINING LABOR FORCE PARTICIPATION

> In Jefferson County, over 44,000 families with children ages 0 to 12 have all parents in the labor force. These working parents who might otherwise have stayed home to care for children earn over $977.4 million annually.

Child care enables parents to participate in the labor force. The majority of families with children in Jefferson and Hardin counties do not have a parent who stays home full-time. In Jefferson County, there are roughly 27,000 dual-parent families with children ages 0 to 12 in which both parents are in the labor force and 18,000 single-parent families with children 0 to 12 in which the parent works—together constituting 44,000 families and 67 percent of all families with children under 12 in the county. [97] In total, parents in Jefferson County who might otherwise have stayed home to care for children, (all single working parents and one parent in each dual-earning household), earn over $997.4 million annually, and account for 10 out of every 100 workers.[98]

> There are over 6,000 families with children in which all parents work in Hardin County. In total, these working parents earn $111.8 million annually.

Likewise, in Hardin County there are approximately 4,000 dual-parent families with children ages 0 to 12 in which both parents are in the labor force and 2,000 single-parent families in which the parent participates in the labor force. These working families with children (6,000 families) account for 61 percent of all families with children ages 0 to 12.[99] Parents in Hardin County who might otherwise have stayed home to care for children (all single working parents and one parent in each dual-earning household) earn over $111.8 million annually and account for 13 out of every 100 workers.[100]

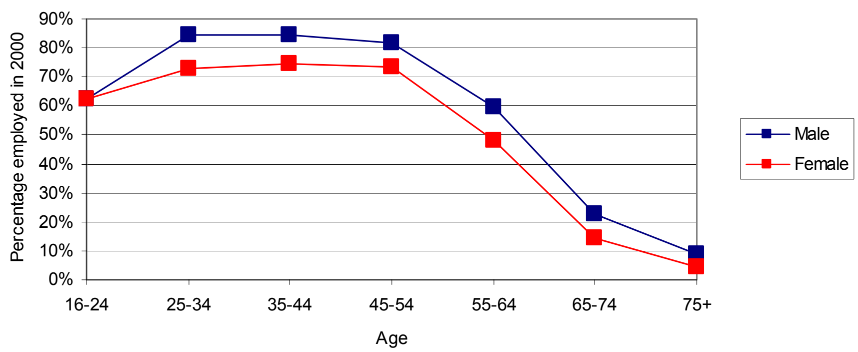
[97] U.S. Census Bureau, Census 2000.
[98] Based on Census 2000 estimates for single-father and single-mother earnings, and the lower of male/female single householder age 15-64 as a proxy for one parent's earnings in a dual-parent household, adjusted to 2003 dollar values.
[99] U.S. Census Bureau. Census 2000.
[100] Based on Census 2000 estimates for single-father and single-mother earnings, and the lower of male/female single householder age 15-64 as a proxy for one parent's earnings in a dual-parent household, adjusted to 2003 dollar values.

Labor force participation rates for women over the last few decades in the Louisville Economic Area have increased significantly, from 44.8 percent in 1980 to 58 percent in 2000 (see section two for more details).[101] Without a significant drop in the labor force participation of fathers during the same time, it is no longer the norm for one parent to provide daytime care and education for children. While not all working parents use licensed child care, the majority of their children are in someone else's care at some time during the day.[102]

Employment has increased for women, but is still below that of men, particularly during child-bearing years (see Figure 1). While males and females are equally likely to be employed when they are between 16 and 24, 73 percent of women 25 to 34 are employed, whereas 84 percent of men in the same age range are employed.

Figure 1

Employment by age by gender in the Louisville area, 2000



A recent report on the Louisville workforce stated that "it is clear that rising female employment rates have been a key element, if not the key element, in supporting job growth in the region….even small changes in the percentage of women holding a job can yield thousands more workers."[103] Clearly, not all families who currently have a parent at home would choose to have that parent in the workforce if there were increases in accessible, affordable, quality child care capacity; but for economic vitality, providing the infrastructure so that all adults who wish to work can find and sustain employment is critical to meeting workforce demands for an economically competitive region.

> "It is clear that rising female employment rates have been a key element, if not the key element, in supporting job growth in the region…Even small changes in the percentage of women holding a job can yield thousands more workers."
> *Report on the Regional Workforce*

101 Census information as reported by Paul A. Coomes (September 26, 2002) in his presentation entitled "The Education and Workforce Issues in the Greater Louisville Economy."
102 Richard Chase. Household Use Survey.
103 Paul Coomes, Michael Price, Barry Kornstein and Marty Scobee (2003). *The Louisville Labor Force: Report on the State of the Regional Workforce 2003*. Kentuckiana Works, p. 11.

INCREASING ECONOMIC PRODUCTIVITY

Like other components of a strong economic infrastructure, the child care industry supports businesses by increasing employer productivity. Quality transportation systems and affordable housing enable workers to get to their jobs and make areas attractive to live and work. Similarly, quality, stable, accessible child care supports businesses. A strong child care infrastructure reduces absenteeism, reduces turnover, and enhances recruitment. These effects have a direct impact on the bottom line for businesses of all sizes. There are a variety of low-and no-cost ways in which businesses can support child care and ensure that employees' child care needs are met.

Absenteeism in 2002 cost an average of $60,000 for small companies and more than $3.6 million for large companies, according to a national survey of human resource executives.[104] While one-third of unscheduled absences were due to personal illness, one-quarter were due to family issues, including children's illness and unscheduled breakdowns of child care arrangements. Nationwide, it is estimated that worker absenteeism due directly to child care problems costs U.S. businesses $3 billion per year.[105] In a national survey conducted by Parents Magazine, working mothers reported missing two full days and six partial days every six months due to child care problems, while working fathers reported missing one full day and four partial days every six months.[106] The same survey highlights the lack of security many parents have in their child care arrangements. Only 40 percent of families surveyed were confident that their current child care arrangements would be in place six months from the date of the survey. This instability translates directly to higher absenteeism and reduced productivity in the workplace.[107]

Absenteeism in 2002 cost an average of $60,000 for small companies and more than $3.6 million for large companies.

Particularly in a business that relies on a skilled workforce, retention of existing employees is critical to the establishment's economic success. Employees who do not feel supported in their jobs or who feel overwhelmed by the balance between work and home obligations may leave their jobs, either to work for other, more family-friendly companies or to stay at home with children. Reducing turnover has a direct impact on an organization's bottom line; turnover is estimated to cost 1.5 times the annual salary of a salaried employee, and .75 times the annual wage income of an hourly employee.[108] This loss of human capital is preventable and there are cost-effective solutions to ensure that employees' child care needs are met.

Strong benefits packages which include child care supports and a company's public commitment to work-life issues increase loyalty and reduce the likelihood that employees will leave their current jobs. During an economic downturn, strategies that boost morale and employee output, but are cost-neutral, may be particularly advantageous. As Paul Orfalea, the founder of Kinko's put it, "wise business leaders know their biggest asset is morale. In a tight economy, it's all the more important to strengthen your business, and take care of your people."[109]

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[104] Harris Interactive. *CCH Unscheduled Absence Survey, 2002.*
[105] As cited in *Building Blocks: A Legislator's Guide to Child Care Policy*, National Conference of State Legislatures, 1997, p. vii.
[106] Parents Magazine survey, August 1997, cited by the Children's Defense Fund, *Polls Indicate Widespread Support For Investments In Child Care,* www.childrensdefense.org/cc_polls.htm.
[107] Ibid.
[108] Personnel Journal, December 1990, as cited in Bright Horizons Family Solutions, *Benefits of Employer-sponsored Care, www.brighthorizons.com*.
[109] Paul Orfalea. Interview, the National Economic Development and Law Center, 2002.

In a national survey, 19 percent of employees at companies with child care programs indicated that they have turned down other job offers rather than lose their work-site child care.[110] Employees using a Nations Bank child care subsidy program had one third the turnover of non-participants in similar jobs.[111] Similarly, while 27 percent of Citicorp employees who did not use an on-site child care center left their positions, only eight percent of those using the center left.[112] In addition to retaining employees, stable, quality child care options also enable parents to continue to advance in their careers after they have started a family.

> *Example*: UAW/Ford offers 24 hour back-up child care services through a network of 29 providers in the Louisville area, including two "near" site child development centers that are run through UAW/Ford.

Not every company can build an on-site child care center. However, lower cost solutions, such as supporting parents with back-up care when regular child care arrangements fall through can reduce costs associated with absenteeism and turnover. Options to support back-up care include an on-site drop-in center, reimbursements for higher emergency child care costs, or flexible scheduling. The UAW-Ford plants in Louisville offer an array of child care benefits to their employees. First, they established a UAW-Ford Community Child Care Network of 29 providers to offer quality, accessible, and emergency/back-up care to UAW-Ford employees. In return, the providers received quality enhancement and accreditation grants, free professional development, technical assistance, and provider resource kits provided by UAW-Ford. Second, they offer 24-hour emergency/back-up care for their employees through the child care network and reimburse providers $25 per day in addition to parent fees. Lastly, in accordance with a deal between UAW and Ford in 1998, UAW-Ford built two state-of-the-art child development centers that are located near each plant in Louisville and have the capacity to serve 220 children each. These child development centers provide high-quality care, and are supported by parent fees and UAW-Ford.[113]

> *Example:* The Kentucky Lottery Corporation (KLC) located in Louisville, recognizes the importance of supporting its employees in their personal lives. Aside from changing flextime policy to allow for family needs, KLC also added 24-hour online child and elder care referral options. As Church Saufley, Vice President of Human Resources explains, "We … understand the impact family demands can have on employee turnover and employee productivity and the costs associated with that if we are not able to support some of the family related needs of our employees. The bottom line is the bottom line—we're more productive, we limit our expenses, and attract better people by being family friendly."
>
> *Church Saufley, Vice President of Human Resources and Organizational Development, Kentucky Lottery Corporation (KLC)*
>
> *Community Coordinated Child Care (4-C), Work Life Focus, Volume 2, Issue 2*

American Express Financial Advisors found that a newly created back-up child care service recovered 105 days in worker productivity.[114] Currently, approximately 16 percent of

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110 Simmons College, *Benefits of Work-Site Child Care*, 1997, as cited by Bright Horizons Family Solutions.
111 Sandra Burud, citing Rodgers and Associates study in *Evidence That Child Care and Work-Life Initiatives Will Impact Business Goals.* Claremont Graduate University, 1999.
112 Bright Horizons Family Solutions. *Return on Investment.* Presentation, 2003.
113 Community Coordinated Child Care (4-C). All information was gathered from Barb Luttrell, Program Coordinator, UAW-Ford Community Child Care Network, in an interview conducted by the National Economic Development and Law Center, July, 2003.
114 Sandra Burud, *Evidence That Child Care and Work-Life Initiatives Will Impact Business Goals.* Claremont Graduate University, 1999.

major employers nationally offer sick or emergency back-up care.[115] Small businesses with fewer employees may find even greater benefits from reducing absenteeism, particularly when programs are low or no cost.

The accessibility of quality, affordable child care, on-site or in the community, is a strong recruitment tool, both for businesses attracting employees and the region encouraging businesses to relocate. Family-friendly policies indicate a company's commitment to the well-being of a potential new employee and his or her personal life. Carlson Companies, which includes Raddison Hotels and T.G.I. Friday's, is one of the largest companies in the U.S. (180,000 employees). In an internal survey of working parents in 2001, they found that 78 percent of parents who were hired since an on-site child care center opened and who use the center reported that the benefit played a role in their decision to seek employment at Carlson.[116]

Build A Strong Workforce:
Family Friendly Options for Employers

Create Flexible Personnel Policies
- Offer Flextime, Flexi-place, Compressed Work Week, and Job Sharing
- Structure Sick/Personal Leave to Meet Dependent Care Needs

Provide Employees Access to Dependent Care Resources
- Partner with Dependent Care Resource and Referral Agencies
- Offer Family & Parenting Seminars/Brown Bag Lunches, Parent Newsletters

Offer Dependent Care Financial Assistance
- Create a Cafeteria-Style Benefit Plan or a Dependent Care Pre-Tax Account
- Offer a Child Care Voucher Program or Develop Corporate Discounts

Develop On-site Child Care or a Network of Providers
- Develop a Network of Child Care Providers for Your Employees
- Contract for On or Near-site Child Care

ENABLING WORKFORCE DEVELOPMENT

Child care is also a critical component of workforce development because without it many working families would not be able to attend school or training sessions. Child care services are needed during various activities, such as education and training, which prepare individuals to enter the workforce and give workers the necessary skills to develop careers and ultimately become self-sufficient members of a community. In recognition of this, many colleges and universities developed on-site child care facilities to accommodate parents pursuing both undergraduate and graduate degrees.

High-quality child care supports workforce development in low-income families more substantially than average-quality child care. One long-term study of the effect of a high-quality child care and development program, which included parental involvement, tracked the performance of parents in addition to the children. The study found that mothers whose children participated in the high-quality program achieved higher educational and employment status than similar mothers whose children were not in the program.[117]

[115] Hewitt Associates. "Hewitt Study Shows Work/Life Benefits Continue to Grow Despite Slowing Economy" April 23, 2001. www.was.hewitt.com
[116] Carlson Companies, Inc. Internal survey, 2001. Minneapolis, MN.
[117] Discussion of results of *The Abecedarian Study*, as cited on www.fpg.unc.edu/~abc/.

Example: Jefferson Community College supports student-parents trying to obtain the skills they need to become economically self-sufficient by offering onsite child care to preschoolers. The center serves up to 57 preschoolers at one time.

ENSURING A STRONG FUTURE WORKFORCE

Quality child care and early education also develop the future workforce, ensuring that children enter traditional K to 12 education ready to succeed. The *Beyond Merger* report produced by the Brookings Institution clearly warns that a labor force shortage will occur in the Louisville metropolitan area, and will threaten the area's economic vitality if it is not adequately addressed.[118] First the workforce is aging: the percentage of workers 25 to 34 decreased 12 percent from 1990 to 2000, whereas the proportion of the workforce 65 and over rose three percent in the same decade.[119] Second, the attainment of higher education degrees has seen slower growth than in the rest of the United States. In the Louisville area, the proportion of residents over age 25 who have a Bachelor's degree increased from 17.2 percent to 22.2 percent in 2000, leaving it fourteenth out of fifteen in comparisons with other metropolitan areas similar in location and size (see Section Two for more detail).[120] Commitments to improving educational attainment over the long term are critical. In Mayor Abramson's *Making Louisville Work,* "Promoting Education and Growing Jobs" was one of four major goals he has for the city. In order to accomplish this he promises to, "help children and families through a focus on early education and after school programs."[121]

A number of large survey and long-term studies consistently find that not only does high-quality child care better a child's chance of success in kindergarten and elementary school, but it also significantly improves a child's chance of thriving as an adult. Children in high-quality child care become more productive members of the labor force and are less likely to require public spending in remedial education, basic needs subsidies, and criminal justice costs.

Quality child care and early education helps to build a skilled future workforce.

A study of low-income children in Chicago found significant differences at the end of high school between children who attended a high-quality child care program and their peers who were not offered the program, in a number of key areas (see Figure 2).[122] [123] The children in the quality child care program were better achievers throughout traditional school years, were less likely to have been in special education or to have repeated a grade, and more likely to have graduated from high school than their peers who were not in the program.

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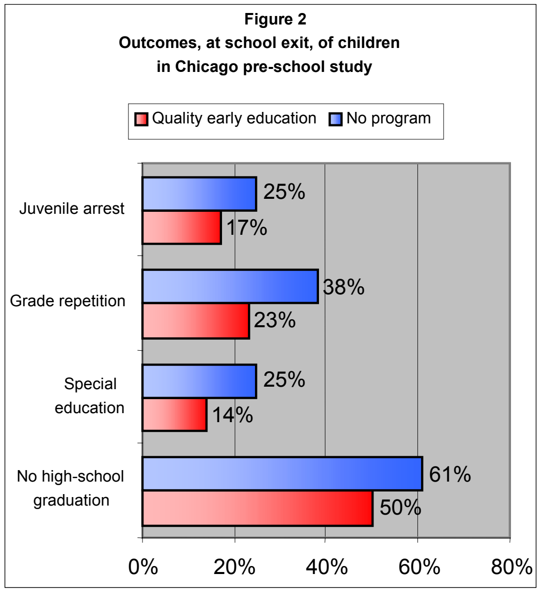
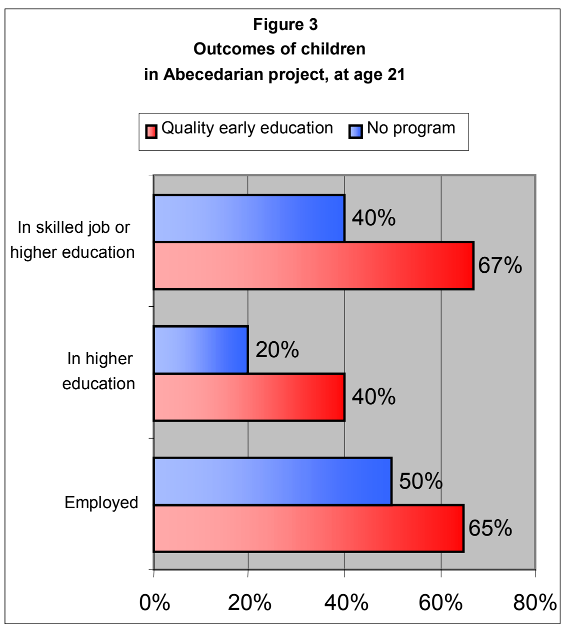
[118] The Brookings Institution Center on Urban and Metropolitan Policy (2003). *Beyond Merger: A competitive Vision for the Regional City of Louisville.*
[119] Bill Wolfe (July 14, 2002). "Report warns of shortfall in the work force." Courier-journal, Louisville, KY.
[120] Brookings Institution (2003.) *Beyond Merger.* Peer regions are (in order of higher educational attainment in 2000): Raleigh, Richmond, Columbus, Kansas City, Omaha, Nashville, Charlotte, Indianapolis, Cincinnati, Birmingham, Greensboro, Jacksonville, Memphis, and Dayton.
[121] Mayor Jerry Abramson. *Making Louisville Work: Jerry Abramson's Platform for Building the New Louisville*, 2002.
[122] Reynolds, A. J., Temple, J. A., Robertson, D. L., Mann, E. A. Long-term effects of an early childhood intervention on educational achievement and juvenile arrest- A 15-year follow-up of low-income children in public schools. The high quality program included wrap-around services that required parent participation. *Journal of American Medical Association,* May 19, 2001, v. 285, no. 18, pages 2239-2346. All values in Figure 1 are statistically significant.
[123] Participants in this longitudinal study were in a "high quality" program that included parental involvement. For a detailed explanation for how Kentucky assesses quality child care, please see Section 1.



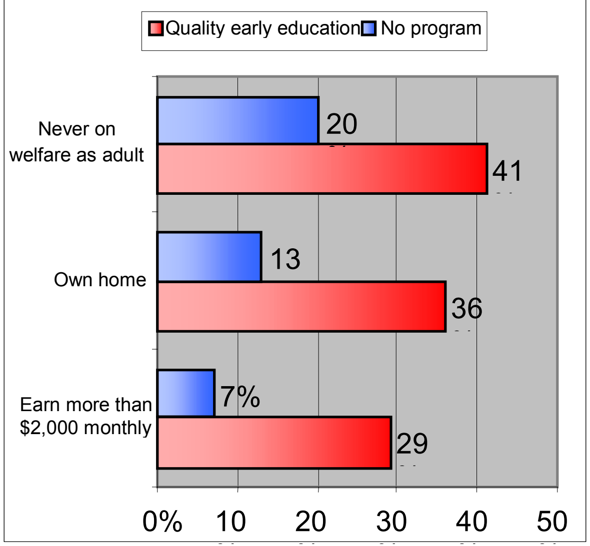
The Abecedarian Project found that children who participated in the early intervention program were more likely to attend college and were more likely to be in a high-skilled job or higher education at age 21 (see Figure 3).[124]



[124] Reynolds, A. J., Temple, J. A., Robertson, D. L., Mann, E. A. Long-term effects of an early childhood intervention on educational achievement and juvenile arrest- A 15-year follow-up of low-income children in public schools. *Journal of American Medical Association,* May 19, 2001, v. 285, no. 18, pages 2239-2346. All values in Figure 1 are statistically significant. The child care programs used for the longitudinal study were considered "high quality" and included parental involvement. For a detailed explanation for how Kentucky assesses quality child care, please see Section 1.

Another long-term study of low-income, African-American children showed similar benefits of high-quality child care on the economic well-being of the children as adults. The children who attended the high-quality child care project, at age 27, earned more money, were more likely to own their own home and were less likely to be on welfare than their peers who were not offered the program (see Figure 4).[125]

Figure 4
Outcomes of children in
Perry pre-school study, at age 27



This collection of research establishes a demonstrable link between high-quality child education and care intervention programs for low-income families and the preparation of qualified, skilled individuals entering the labor force. While not every early education program can guarantee lifelong success for all participants, quality early childhood education and care can increase children's ability to enter traditional K to 12 schooling ready to learn, and prepare them for future opportunities.[126]

Quality early childhood education and care can increase children's ability to enter the K-12 school system ready to learn, and prepare them for future opportunities.

Without significant investments to develop a skilled workforce for the future, the economy of the region will suffer and the economic vision will not be realized. Schools and universities receive many public investments because their role in educating and preparing children for the future labor market is clear. While more research will enable a better understanding of the long-term effects of high-quality child care for all children, current findings indicate that investments in early education have greater returns than educational investments in later life.[127] Understanding

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[125] Schweinwart, L. J., Barnes, H.V., Weikart, D. P. Significant benefits: The High/Scope Perry preschool study through age 27 (Monographs of the High/Scope Educational Research Foundation, 10). Ypsilanti, MI: High/Scope Press, 1993. Participants in this longitudinal study were in a "high quality" program that included parental involvement. For a detailed explanation for how Kentucky assesses quality child care, please see Section 1.

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

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

that child care is part of the education system ensures that decision makers will gear child care systems toward preparing the future workforce for success.

"The returns to human capital investments are greatest for the young for two reasons: (a) younger persons have a longer horizon over which to recoup the fruits of their investments and (b) skill begets skill."

James J. Heckman, Department of Economics, University of Chicago

Aaron Wildavsky Forum, School of Public Policy, University of California at Berkeley

REDUCING FUTURE PUBLIC SECTOR SPENDING

The economic benefits of improving children's lives extend past the children and their families. Decreasing the need for remedial education in the traditional school system and decreasing involvement in the criminal justice and welfare systems save public funds otherwise spent on these programs. Increased earnings by adults who attended quality early education programs translate to a larger tax base. Cost-benefit analyses of three long-term, high-quality, early education intervention programs indicate that there are significant future savings when money is invested on high-quality child care, particularly for low-income children. Future savings can be found in: criminal justice costs and tangible costs to victims; reductions in grade retention and special education expenditures; decreased child welfare spending associated with child abuse and neglect; decreased spending on child care; increased adult earnings and tax revenues based on increased educational attainment and decreased health costs from smoking and other causes. Increased higher education costs were also factored into each cost-benefit analysis (see Table 1 for a summary).[128]

Table 1
Economic Benefits of Targeted Early Education Intervention Programs

	Cost of Program per Child	Lifetime Benefit to Society per Child
Chicago CPC Study	$7,000	$48,000
Perry Pre-School Project	$12,000	$108,000
Abecedarian Project	$36,000	$136,000

A recent study by economists at the Federal Reserve Bank in Minneapolis used the Perry High-Scope findings to estimate that quality early childhood development programs generate a 16 percent rate of return on investment, 12 percent of which is a public rate of return. As a result, the authors of the survey argue that high-quality early education is one of the strongest candidates for public funding.[129]

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

[129] Art Rolnick and Rob Grunewald. *Early Childhood Development: Economic Development with a High Public Return*. Fedgazette. Minneapolis, MN: Federal Reserve Bank of Minneapolis, January, 2003. Quotation in text box is from page 1.

While these analyses are based on findings of three particular and unique intervention programs for at-risk populations, they do indicate the economic value of investing in quality child care, particularly for low-income young children in Kentucky.

> "Early childhood development programs are rarely portrayed as economic development initiatives, and we think that is a mistake. Such programs, if they appear at all, are at the bottom of the economic development lists for state and local governments. They should be at the top. Most of the numerous projects and initiatives that state and local governments fund in the name of creating new private businesses and new jobs result in few public benefits. In contrast, studies find that well-focused investments in early childhood development yield high public as well as private returns."
>
> *Art Rolnick, Senior Vice President and Director of Research, and*
> *Rob Grunewald, Regional Economics Analyst, Federal Reserve Bank of Minneapolis*

After-school programs for school-age children also serve as an effective crime prevention activity and save public sector dollars. Nationally, nearly 7 million children ages 6-14 (18% of this age group) are home alone after school each week during the afternoon hours when juvenile crime peaks.[130]

In a 1990 study, eighth graders who were left home alone after school reported greater use of cigarettes, alcohol, and marijuana than those who were in adult-supervised settings.[131] Risk behaviors during adolescence predict a future of increased criminal behavior and health problems in adulthood. In a George Mason University study, 91 percent of Police Chiefs surveyed agreed that "If America does not make greater investments in after-school and educational child care programs to help children and youth now, we will pay more later in crime, welfare, and other costs."[132]

> Ninety-one percent of Police Chiefs agree:
> "*If America does not make greater investments in after-school and educational child care programs to help children and youth now, we will pay more later in crime, welfare, and other costs."*

ECONOMIC DEVELOPMENT STRATEGIES FOR CHILD CARE

Saving public dollars, maintaining high labor force participation rates, enabling workforce development activities for parents, and developing the future workforce make child care a target area for economic development activities. Depending upon regional needs and priorities, several broad strategies to link child care and economic development can be used. Such strategies include, but are not limited to:

- Improving the quality of existing child care programs
- Supporting a stable and skilled child care workforce
- Providing options for financing the construction and renovation of high-quality facilities
- Using economic development resources to incorporate child care into future development

130 K. Smith, *Who's Minding the Kids? Child Care Arrangements: Fall 1995.* Current Population Reports P70-70, Washington, DC: US Census Bureau.
131 K.M. Dwyer, et al, *Characteristics of Eighth Grade Students Who Initiate Self-Care in Elementary and Junior High School,* Pediatrics, Vol. 86, No. 3, 1990.
132 Fight Crime, Invest in Kids, *Poll of Police Chiefs conducted by George Mason University Professors Stephen D. Mastrofski and Scott Keeter.* Washington, DC, November 1, 1999.

- Partnering for long-term urban planning that incorporates child care

These strategies can work on local, regional, or statewide levels. Some promising practices are described below. They represent a small piece of the overall child care picture in the state. Expanding or replicating these efforts will support the child care industry and Kentucky's economic development.

IMPROVING THE QUALITY OF EXISTING CHILD CARE PROGRAMS

Although recent research demonstrates the importance of high-quality child care for school readiness and the importance of school readiness on academic achievement and later success in adulthood, the concept of cultivating the future workforce in the child care classrooms of America as a public policy goal has not yet been well-established. Given the demonstrated economic benefits of targeted investments in high-quality early education opportunities, particularly for low-income children, resources and planning should be dedicated to providing these services to as many children in Kentucky as possible, and to educating parents about the elements of quality programs and the potential benefits for their children.

> *Example:* In 2001, Kentucky introduced a child care quality assessment program entitled STARS for KIDS Now, which is part of a statewide early childhood initiative. Family child care homes and child care centers may voluntarily undergo this assessment. This is an important step in assisting Kentucky's child care infrastructure provide quality care. As Kim Townley, Ph.D., Executive Director of the Governor's Office of Early Childhood Development says, "Parents now have a way of identifying quality when searching for a care setting outside the home. Child care programs now have specific program standards to work toward as they seek to provide safe and appropriate care for children."[133]

SUPPORTING A STABLE AND SKILLED WORKFORCE

A stable and skilled child care workforce is critical to industry sustainability and long-term development of program quality. The issue of workforce development within the child care industry is closely related to the task of reframing child care as an economic development issue. High rates of staff turnover lower program quality and negatively affect the lives of the children who child care programs serve. Staff salaries and retention are excellent predictors of staff education, which in turn predicts the quality of classroom interactions.[134]

Child care providers typically have tight budgets that can rarely afford professional development benefits or programs, such as trainings and conferences, for their staff or for themselves. Without outside grants or incentive systems, professional development benefits are not feasible. With high turnover within the industry, professional development efforts will not result in a skilled workforce over the long term.

Child care professionals who have extensive training in child development and early education may have little business training. Providing technical assistance about the business aspects of operating a child care facility will reduce turnover within the industry. Entities such as

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[133] Office of Governor Patton. *Governor Patton Announces First Child Care Centers in Kentucky to Receive STAR Ratings, Press Release, 2001.* For a detailed description of how Kentucky assess quality child care, please see Section 1.

[134] L. Vandell and B. Wolfe. *Child Care Quality: Does it Matter and Does it Need to Be Improved?* Institute for Research on Poverty, http://aspe.hhs.gov/hsp/ccquality00/ccqual.htm#econ.

Small Business Development Centers (SBDC's) provide various kinds of small businesses with assistance in financial and business planning, marketing and management. SBDC's may help individuals in the child care industry, particularly when the centers have expertise in child care business issues.

All of these issues undermine the economic contribution child care makes to the Jefferson and Hardin counties. Staffing shortages and rapid turnover reduce the quality of many programs and minimize the positive effects that Kentucky's children and the future economy would experience from quality early education. Efforts to support and stabilize the child care workforce improve the sustainability and quality of the child care industry.

Example: KIDS NOW provides scholarship funds and incentives for the child care workforce to attend early care and education courses.

FINANCING OF FACILITIES AND BUSINESSES

Innovative strategies to support the high costs of building or renovating facilities are necessary to increase the capacity of high-quality programs for children. Providing public dollars for facilities development, in low-interest loans, grants, or matching funds support the development of facilities. Many businesses rely on debt financing to invest in long-term capital assessments and expand their operations. Although the child care industry has not historically relied on debt financing, it may be cost effective and beneficial to some providers to incur long-term debt for facilities. Economic development resources can be made available to lower the cost of financing, provide more flexible or longer payment terms, or provide credit enhancement for borrowers who lack a track record in carrying and repaying debt.

Example: The Louisville Community Development Bank, located in West Louisville, has made loans to start or expand five facilities in the city. The centers offer services for infants, for school-age siblings after school, for special needs young children, and for children from diverse ethnicities.[135] Gary Gambrell, Vice President of the Bank, says, "We focus on making loans to small businesses that create jobs in the most distressed areas of the city. If there is no child care, how can parents return to the workforce and fill the positions we've created."

ECONOMIC DEVELOPMENT RESOURCES

Economic Development resources and planning can be used to ensure that child care is incorporated into future development in the state. For example, child care centers frequently encounter difficulties finding a space in which to do business. Some economic development offices specialize in helping businesses find suitable locations. They also help child care programs find public and private land, acquire land for business purposes, and obtain any necessary zoning variances.

Example: In the 2003 Visioning Report Update, Greater Louisville Inc. recognizes that "attracting and retaining young professional talent remains a major challenge, and efforts to focus on developing high-skill/high-paying jobs and making quality-of-life improvements…must be a community priority."[136] However, without an affordable, quality, and accessible child care system, the region may struggle to attract working parents.

[135] Louisville Success: The newsmagazine of the Louisville Community Development Bank (2003).
[136] Greater Louisville, Inc. (2003) 2002 Visioning Report Update.

PARTNERING FOR LONGER-TERM PLANNING

Government, businesses, child care advocates, and financial institutions must partner in long-term planning and strategizing to strengthen the child care infrastructure. Working with each other, businesses can develop solutions to address their employee's specific needs. Working with other child care stakeholders outside of the business community helps to create innovative public/private partnerships to purchase property, develop facilities, and/or strengthen existing child care enterprises. Encouraging public policy improvements or local projects aimed at increasing supply, affordability, and quality of child care highlights a business' commitment to work-family issues.

> *Example:* KFC Corporation, headquartered in Louisville, started one of the first corporate national charities, called Colonel's Kids, to address "America's child care crisis." Their mission is to help make high-quality child care available to more families throughout the country. They have partnered with the YMCA and the Entertainment Industry Foundation.[137]

SECTION SUMMARY

Like transportation, education and public works, child care is a necessary and vital part of the economic infrastructure. The child care industry, economic development leaders in government, non-profit agencies and businesses must partner if they are to meet the needs of the changing Kentucky economy. Investing in the child care infrastructure of the Louisville economic area has direct positive benefits for the region's overall economic competitiveness. Investments in high-quality early education programs reduce future public expenditures and help the region to have a skilled and productive workforce now and in the future. A healthy child care industry helps businesses attract and retain the best employees and enables the state to attract and retain the best businesses. In the same way that local government and the private sector collaborate to increase the availability of affordable housing and quality transportation systems in order to attract a skilled workforce, they benefit from investing together in the child care infrastructure. The child care industry is ripe for significant public and private investment in Jefferson and Hardin counties.

[137] Visit www.colonelskids.com for more information.

CONCLUSION AND RECOMMENDATIONS

Jefferson and Hardin's child care industries are critical to overall economic vitality and quality of life.

In Jefferson County, the licensed child care industry directly supports an estimated 3,840 local jobs and generates roughly $119.8 million dollars per year in gross receipts. Annually, $44.7 million is brought into Jefferson County through public/private child care assistance and investment for low-income families and child care quality improvement initiatives.

Hardin County's child care industry directly employs 438 professionals and generates an estimated $14.9 million dollars per year in gross receipts. Roughly, $4.2 million is brought into Hardin County through public child care assistance and investment.

The child care industry in both counties helps sustain the county's growing workforce by enabling parents to enter the workforce or return to it sooner*. In total, working parents who might otherwise have stayed home to care for children earn over $997.4 million in Jefferson County and over $111.8 million in Hardin County.* In addition, stable, quality child care improves worker productivity and expands the ability of parents to advance in their careers and earnings.

High-quality early care and education increases school readiness and enables the development of the future workforce. Investing in early care and education improves the success of children in the K-12 public education system, raises test scores and high-school graduation rates, and lowers grade repetition and special education needs. *Every dollar spent on quality care and education for low-income children saves as much as seven dollars in future public spending.*

Jefferson and Hardin counties' economic and demographic profiles indicate that there is an increasing need for affordable, accessible, and quality child care. *On its own, the child care industry is unable to offer quality child care at a price that residents can afford.* Without local long-term planning using a collaboration of stakeholders to address barriers to child care affordability, sustainability and quality, Jefferson and Hardin counties' child care industries and the economic region as a whole will not meet their potential in the next few years.

LOCAL CONSTRAINTS ON CHILD CARE IN JEFFERSON AND HARDIN COUNTIES

- Welfare reform and the growth of low-wage jobs in Jefferson and Hardin counties increase the need for subsidized child care. Additionally, demand is growing for affordable, quality child care in each county.
- Child care is becoming increasingly less affordable in relation to the cost of living in Jefferson and Hardin counties. Escalating child care costs and other household items consume a disproportionate share of the household income of low- and moderate-income families.
- Child care centers and family child care homes struggle to attract and retain qualified staff. The quality of child care is directly related to child care workforce retention and development. Investments in improving the skills and increasing the wages of the child care workforce is needed to ensure that all children enter kindergarten ready to learn.

- Demand for subsidized, non-traditional hour, and back-up child care exceeds the supply in Jefferson and Hardin counties.

RECOMMENDATIONS FOR JEFFERSON AND HARDIN COUNTIES

While Jefferson and Hardin counties' child care industries differ in size, they face similar obstacles: affordability, accessibility, low-quality, and a shortage of public and private sector investment. Therefore, broad strategies for addressing the needs of the child care infrastructure in each county are comparable, but the scope and execution of these strategies vary from county to county.

INCORPORATE CHILD CARE INTO ECONOMIC DEVELOPMENT

Economic development activities that build the infrastructure of the child care industry are natural given the economic benefits of the industry. Including child care into planning documents across the state, encouraging child care providers to join business organizations, ensuring that low-income children have access to quality child development and education programs, and strengthening the infrastructure of quality child care to attract and retain a skilled workforce are examples of some successful strategies.

Government *(examples)*

- Incorporate child care into county and city comprehensive plans.
- Pass tax credit legislation to support child care.
- Encourage zoning regulations that are child care friendly.

Business *(examples)*

- Create incentives for child care providers to become members of Chambers of Commerce and other business organizations.
- Match public economic development dollars with private dollars.
- Develop child care as a recruitment tool for educated and skilled working families.

Child Care Industry *(examples)*

- Collaborate with Small Business Development Centers to help child care providers access technical assistance, training, loan products, and other resources for small businesses.
- Introduce strategies to local government and businesses that incorporate child care into economic development planning.

INVOLVE BUSINESSES AND BANKS IN THE CHILD CARE INDUSTRY

Businesses work with each other and with other groups of stakeholders to strengthen transportation systems, K-12 and higher education, and housing availability because they understand that these economic infrastructures enable businesses to operate. Similarly, understanding that child care enables companies to conduct business underscores the importance of business involvement in sustaining the child care infrastructure. Many of Jefferson and Hardin's businesses and financial institutions are already collaborating with child care leaders to enhance the effectiveness of the industry in the county. However, increased collaboration with the private sector is needed to support this vital economic infrastructure.

Government *(examples)*

- Provide incentives for businesses and financial institutions to invest in child care.

Business/Banks *(examples)*

- Offer improved child care benefits for employees and mentor other businesses newly engaged in providing child care benefits for employees.
- *Jefferson County:* Support the work of organizations that are actively engaged in collaborating with nontraditional child care stakeholders, such as 4-C, Success By Six, and Greater Louisville Inc.'s Work/Life Alliance.
- *Hardin County:* Replicate business partnerships like the Work/Life Alliance initiative currently championed by Greater Louisville Inc..
- Offer technical assistance, facilities financing and business skills training to child care providers.
- Encourage involvement in supporting child care by allowing employees "release time" to volunteer skills needed by child care providers.
- Develop loan products, such as micro-loans, or low-interest loan programs, with alternative payment structures for child care businesses.

Child Care Industry *(examples)*

- Maximize the economic and political force of the child care industry.
- Create an easily identifiable fund for businesses, foundations, and individuals wishing to invest in improving the quality and affordability of child care.
- Work with businesses that have implemented successful child care programs to create an active advocacy voice within the private sector.

ENHANCE THE QUALITY OF THE EXISTING CHILD CARE INFRASTRUCTURE

As Steve Higdon, President/CEO of Greater Louisville Inc., said, “Access to quality, affordable child care is one very important aspect of greater Louisville's quality of life.” Additionally, long-term studies show the economic and social importance of quality intervention programs for low-income children. Quality child care is a vital condition for the improvement of the region’s human capital. In short, investing in quality improvement initiatives will enhance the economy and quality of life in each county.

Government *(examples)*

- Support and sustain quality improvement initiatives, including KIDSNow and the STARS quality assessment program.
- Develop sustained funding for workforce development for child care professionals, including recruitment, training, and compensation.
- Designate county government liaisons with specialized knowledge of child care issues to work with the child care industry and local policy makers.
- Universal pre-school in Jefferson or Hardin counties should integrate the existing child care infrastructure.

Business *(examples)*

- Provide benefits to employees that include access to quality child care programs.
- *Jefferson County:* Advocate publicly for improving the quality of child care programs as an essential component for having “every child in JCPS reading at grade level by fourth grade”—the Educational Committee for Greater Louisville Inc.’s principal recommendation for improving the academic performance in the county.

Child Care Industry *(examples)*

- Create an on-going partnership with the public school system to ensure continuity and a smooth transition to kindergarten.
- Encourage incentives for programs that offer after-hours care, care during nontraditional workday hours, and back-up care.
- Educate parents and providers about the components and benefits of high-quality child care.
- Increase professional development opportunities for child care professionals.
- Promote programs that are inclusive and culturally responsive.

IMPROVE THE AFFORDABILITY AND ACCESSIBLITY OF CHILD CARE

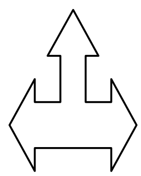
While the vast majority of parents work while they have young children in the home, not all families have access to licensed child care. Affordability and transportation issues hinder families' access to quality care. Cost effective solutions developed by a range child care stakeholders are needed to ensure that all families have access to economic and educational opportunities.

Government *(examples)*

- Create loan funds and resources using public/private dollars to ensure that providers can access loans and increase sustainability.
- Ensure that child care is affordable for all working families.
- Integrate child care into transportation planning.

Business *(examples)*

- Develop innovative partnerships to ensure that child care is affordable for all working families.
- Offer child care financial assistance by creating a pre-tax flexible spending account plan or a child care voucher program.



Child Care Industry *(examples)*

- Access nontraditional revenue streams (motor vehicle licensing, lottery, casino funds, tobacco settlement monies, and private sector investments) to fund child care for low-income families and quality improvement initiatives.
- Encourage higher learning institutions to access federal grants for campus-based child care.

CONCLUSION

The economic benefits of the child care industry are far reaching and comprehensive. A strong child care system benefits not only parents and child care providers but also the business community, financing institutions, industry, and local government.

Collaborative investments from all of these sectors are needed to enhance the affordability and quality of the child care system. Improvements cannot be made by relying on the investments of parents and child care providers alone.

Expansion of the cooperative strategies and examples highlighted in this report will develop cost-effective and innovative solutions to ensure that child care is affordable, accessible, and of high quality in Jefferson and Hardin counties.

APPENDIX A:

METHODOLOGY FOR CALCULATING GROSS RECEIPTS AND DIRECT EMPLOYMENT FOR LICENSED CHILD CARE

The economic contribution of the child care industry is significantly undercounted in traditional economic accounting tools, and alternate methodologies for collecting data are necessary. The methodology used in this report relies on comprehensive, timely data about care in child care facilities, maintained by the Community Coordinated Child Care (4-C), Jefferson and Hardin counties' regional resource and referral agency (R&R). Each regional resource and referral agency is required by Kentucky law to maintain a database containing licensed child care capacity, average costs, vacancies, and enrollment. For this report, enrollment, capacity, and cost information were derived from a 2003 survey of child care providers in Jefferson and Hardin counties.

The estimates of gross receipts and direct employment represent a "snapshot" of the industry taken at a particular time. It is important to note that the estimates only capture the formal child care sector because enrollment and costs are difficult to measure for the informal child care sector. Because Head Start programs and State Pre-schools operate independently of the regional R&R, we have not included their economic impact in our analysis. Adding informal, legally unlicensed care, Head Start programs and State Pre-schools would significantly increase gross receipts and direct employment figures.

GROSS RECEIPTS

Gross receipts estimates for family child care homes (Certified and Type II) and child care centers (Type I) are based on one simple calculation:

Enrollment x Average Cost/Child/Year = Gross Receipts

ENROLLMENT

Enrollment numbers are derived from Jefferson and Hardin counties regional R&R, which tracks enrollment in licensed child care centers and licensed family child care homes in each county by children's age groups (infant, toddler, pre-school-age child, and school-age child).

AVERAGE COST/CHILD/YEAR

In order to calculate the average yearly rate for each type of care and each age group we relied on *Kentucky Mean Daily Rates Reported in Hardin and Jefferson Counties (from 2002 Market Rate Study*. The survey reports full- and part-time daily rates for each county. A yearly average was taken from these rates and used in the gross receipts calculations.

DIRECT EMPLOYMENT

Family Child Care Homes (Certified and Type II)

Certified Family Child Care Homes (licensed for 6)	= 1 Employee
Type II Family Child Care Homes (licensed for 12)	= 2 Employees

Child Care Centers (Type I)

These figures are calculated based on the enrollment of children (by age) for child care centers and the state-required ratio of staff to children. In general, younger children require a lower staff-to-child ratio, so a center that cares for 10 infants will require 2 adults to care for those infants, whereas a center that cares for 10 school-aged children will require only one adult to care for those children.

1. Center-based infant care (under 1 year): = (1 employee for every 5 children)

2. Center-based toddler care:
   Toddler 1 (1-2 years) = (1 employee for every 6 children)
   Toddler 2 (2-3 years) = (1 employee for every 12 children)

3. Center based care for preschoolers:
   Preschoolers 1 (3-4 years) = (1 employee for every 12 children)
   Preschoolers 2 (4-5 years) = (1 employee for every 14 children)

4. Center-based care for school-age children:
   School-age 1 (5-7 years) = (1 employee for every 15 children)
   School-age 2 (8-9 years) = (1 employee for every 20 children)
   School-age 2 (10-12 years) = (1 employee for every 25 children)

Non-Teaching Staff

Custodians/Cooks/Receptionists: Many centers fill these positions with teaching staff. Larger centers tend to have separate employees in these roles. Counties are the best judges of the general practices in their area. The following are guidelines that were used to estimate the direct employment of non-teaching staff. Each slot can be considered full time.

Custodians: Typical practice is to have one custodian for every center over 80 children. The formula is: **# of centers with slots for more than 80 children = # of custodians**

Cooks: Typical practice is that larger centers have cooks:
 # number of centers with over 80 children = # of cooks

Receptionists: Typical practice is to have one receptionist for every center over 80 children: **# of centers with slots for more than 80 children = # of receptionists**

Non-teaching supervisory staff (directors): Typical practice is to have one director for every 80 children: **# of licensed slots / 80 = # of supervisory staff**

Administrative (off site): Typical practice is for larger centers to have off-site as well as on-site administrators: **# of centers with slots for over 80 children = # of administrators**

APPENDIX B:

INDIRECT AND INDUCED EFFECTS OF THE CHILD CARE INDUSTRY IN JEFFERSON AND HARDIN COUNTY

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

These estimates for the impact of child care services on indirect and induced earnings and other productivity effects are based on the application of the 2000 Jefferson County and Hardin County module of the IMPLAN Input-Output (I-O) model. Initially developed for use by the U.S. Forest Service, IMPLAN is now used in many fields. It relies on the same basic model structure and underlying economic data as the U.S. Department of Commerce Bureau of Economic Analysis Regional Impact Modeling System (RIMS).

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

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

The multiplier effect estimates the links between an industry and other areas of the economy. For this analysis, Type II multipliers, which exclude government spending, are used. Estimates for the impact of child care on the economy are based on three primary types of multipliers:

- Direct effects: Effects introduced into the state's economy as a result of spending on child care services.
- Indirect effects: Effects reflecting spending by the child care industry
- Induced effects: Effects on household spending by the child care workforce. These effects reflect changes in the state's economy caused by changes (for instance, increases) in spending patterns as a result of the direct and indirect activity.

Based on a direct employment estimate of 3,840 jobs in licensed child care in Jefferson County, 961 full-time equivalent (FTE) indirect jobs are sustained by licensed child care. For example, these include jobs in accounting (43 jobs), real estate (78 jobs), maintenance and repair (57 jobs).

Based on a direct employment estimate of 438 jobs in Hardin County's licensed child care industry, 108 indirect jobs are supported. These include: 10 real estate jobs, five maintenance and repair jobs, and three jobs in accounting.

Based on a direct employment estimate of 3,840 jobs in Jefferson County's licensed child care industry, an additional 815 FTE induced jobs are sustained by the licensed child care industry. These include jobs in health care (127 jobs) and restaurants and bars (83 jobs).

Likewise, based on a direct employment estimate of 438 FTEs in Hardin County's licensed child care industry an additional 61 induced jobs are sustained, including eight jobs in restaurants and bars and nine health care jobs.